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ABSTRACT

The history of assessment in South Dakota, the creation of the Assessment Program Team at South Dakota State University (SDSU), the rationale and purpose of assessment programs, and the initial findings from a 6-month assessment team analysis of assessment data at SDSU are highlighted. The data were collected during the first 2 years of SDSU's Assessment Program. The three reports included in this document cover surveys of students, assessing the general education requirements, and assessment and admissions. The freshman profile survey includes reasons for attending college, family background, high school background, self-perception, future events and goals, and social, political, and moral issues; the senior profile covers characteristics, level of satisfaction, student growth, college experiences, and curriculum and issues. The section on assessing the general education core curriculum requirements focuses on methodology (areas to assess in the general core areas, objectives, methodology to accomplish the needs identified, future recommendations to meet university needs, and literature cited), and baseline data on SDSU freshmen and sophomore American College Testing Program results. The potential contribution of assessment at SDSU admissions and recommendations for future research are also reported. It is concluded that there is a need for valid, long-run assessment data at SDSU, and that it must be organized, analyzed, and evaluated in a manner that is meaningful to university planners and decision makers. (SM)

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Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

December, 1987

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This paper is part of an on-going assessment collection maintained by the Forum. We are pleased to make it more widely available through the ERIC system.

For further information about ASSESSMENT FORUM activities, contact Patricia Hutchings, Director, AAHE ASSESSMENT FORUM, One Dupont Circle, Suite 600, Washington, DC 20036

The data contained in this report were collected during the first two years of South Dakota State University's Assessment Program. Some of the instruments described herein were not designed to measure college level performance. In addition, since the instruments were mandated by the South Dakota Board of Regents, they were not necessarily the most appropriate instruments for the institution. South Dakota State University has since developed an assessment program specifically designed to measure the extent to which it is achieving its mission and goals. As a result, some of the instruments described in this report have been replaced with more appropriate instruments.

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Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Overview

December, 1987

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INTRODUCTION

Since the publication of A Nation at Risk in 1983 and of Involvement in Learning in 1984, American society has been scrutinizing higher education more closely. College and university administrators, in response to this scrutiny, are now stressing the quality of their programs to show the public that the benefit which students gain from higher education will ultimately benefit society.

This quest for excellence is indeed a sound idea, but valid measures of excellence and quality are proving to be difficult to develop. To address state and local concerns for academic excellence, many universities have instituted assessment programs to define quality with hard data from student surveys, demographics and tests. In fact, more than two-thirds of the state systems currently have assessment programs in either the planning or implementation stage.

This report highlights the history of assessment in South Dakota, the creation of the Assessment Program Team at South Dakota State University, the rationale and purpose of assessment programs, and the initial findings from the team's analysis of assessment data at South Dakota State University.

Assessment in South Dakota Colleges and Universities

In response to the nationwide focus on quality, the South Dakota Board of Regents (BOR), in the fall of 1984, mandated a comprehensive assessment program for the state's six public colleges and universities. Nationally normed, standardized tests were administered, and raw data accumulated. The reaction to this mandated assessment was less than enthusiastic. Frank discussions concerning the acceptance and appropriateness of this mandated assessment program arose on all state campuses.

Yet, these first years of the program did make one point clear: Assessment is an integral part of quality in that it can provide evidence of curricular and program excellence.

In May 1987, the BOR, after reviewing the findings and recommendations of the statewide Assessment Committee, shifted the focus of assessment dramatically. Whereas the original program was externally imposed, the new program specified that each state college and university now had the freedom to develop their own unique assessment program. In addition, each institution was encouraged to incorporate assessment into their long-range planning, policy development, and academic program review.

Assessment at South Dakota State University

The Assessment Program Team

The Assessment Program Team at SDSU, consisting of four faculty members and two assessment administrators, was initiated within days of the May 1987 BOR meeting. The charge to the team was, and is, to provide information for use with SDSU's program review and curriculum development. This documentation is critical for determining the long-range direction of the university as well as the shorter-range fine-tuning of academic programs.

Since its inception, the Assessment Program Team has analyzed, challenged and evaluated the data accumulated from various student assessments completed since early 1985. The results of this evaluation, by no means complete, are highlighted in this overview report and detailed in the reports which follow.

The intention of the Assessment Program Team is to raise questions and issues that are critical for university administrators and faculty to consider in their strategic planning process. Individually, the team members analyze data related to specific areas of interest identified as central to SDSU's future. Collectively, the team members question and organize the data in such a way that patterns and relationships begin to emerge. Rather than merely providing these facts for the university decisionmakers, the Assessment Program Team suggests areas where specific questions might be addressed in the strategic planning process.

The Purpose of Educational Assessment

The purpose of educational assessment is to provide institutions, departments, and students with information in identifying strengths and weaknesses within university programs. Assessment determines the students' level of content knowledge acquired through the college curricula, their ability to process that knowledge, and their values, perceptions, attitudes and beliefs.

Although the emphasis is on program review, student input provides the raw data needed for assessing university programs. However, the scope of assessment is clearly beyond the mere testing of students. Oftentimes, student attributes can not be measured through tests or other objective measures. Therefore, assessment should include multiple measures such as reports, simulation exercises, comprehensive interviews, or some other type of experience. Demographic data is necessary so that personal and cultural characteristics might emerge from the data, providing further meaning and direction.

An assessment program provides information for maintaining or improving curricula, instruction, academic advising, or admissions marketing. Assessment provides the university with documentation for accreditation purposes. In addition, assessment can provide the necessary documentation for university faculty and staff, the BOR, legislature, governor,

and the public that the institution is living up to its promises when granting a degree.

In short, assessment feeds into the planning process at SDSU by providing a database. The assessment program can provide evidence for answering questions such as, "Is higher education worth the cost?" and "Are our students learning and obtaining the life-long skills/qualities necessary to meet society's demands?" In fact, the Assessment Program Team can provide evidence to decisionmakers on whether or not the institution is headed in the right direction. Planners can not consider what "should be" until they know what "is".

SDSU's Use of Assessment Information

The assessment process at SDSU has been facilitated by the grouping of resources around five "streams of initiative":

1. Academic Program Review
2. Core Curriculum Review (Blue Ribbon Panel)
3. Admissions Marketing
4. Quality of University Life (includes faculty & students)
5. Accreditation

The university administrators and faculty associated with these initiatives need documentation on the environment and resources of the university. Without such information, quality planning and productive decisionmaking is virtually impossible. For instance, documented facts and trends concerning student finances and family background is useful in planning an admissions marketing strategy. A matched comparison of the ACT scores of students who took the exam as high school seniors and again as second-semester sophomores would be useful in evaluating the university's core curriculum requirements. Student perceptions may provide meaningful data for assessing the services and programs offered by SDSU.

This document, consisting of four reports, is the Assessment Program Team's first written evaluation to the university on assessment information which has been analyzed and may be useful in supporting the above initiatives. A brief overview of the results is below. The reader is encouraged to examine Reports 2, 3, and 4, including each executive summary, for a more thorough discussion of the analysis.

RESULTS

Explanation and Overview

Since the Spring of 1985, various groups of students have completed different assessment instruments. Beginning with the ACT Assessment, which is required of all entering freshmen, SDSU students are requested to complete occasional surveys, standardized tests, and other assessment instruments. Prior to graduation, seniors must complete an exit experience administered by their department. No student is given every

assessment instrument. Sampling and rotation of instruments help keep costs down while providing accurate and timely data.

Due to time constraints, the Assessment Program Team has focused on four distinct areas:

1. Freshmen Surveys
2. Senior Surveys
3. ACT Assessment Scores
4. Admissions Marketing

These four areas were so chosen because the data was readily available and provided critical information on the "streams of initiative" at SDSU. Brief highlights of the results are presented below. Detailed analyses may be found in the reports which follow.

Freshmen Survey Results

During the Fall of 1986, SDSU participated in the Cooperative Institutional Research Program's (CIRP) freshman survey. The resulting data was used to create a picture of a "typical" entering freshman at SDSU. The following characterization is based on the most frequent responses to the CIRP questions. The typical SDSU freshman:

1. is white, unmarried, age 18
2. applied to no other college, only SDSU
3. has parents who do not have a college degree
4. has a father who is a farmer and a mother who is a homemaker
5. comes from a home where annual family income is less than $25,000
6. graduated in top 40% of high school class
7. has not had two years of a foreign language
8. chose to attend college to get a better job, make more money and learn about things that interest him/her
9. ranks self lower in all abilities and attributes than their national counterpart
10. tends to be more conservative on political, social and moral issues than their national counterpart

While there are many similarities between SDSU freshmen and their counterparts at other medium-sized institutions, their backgrounds are noticeably different. The implications for decisionmakers are tremendous. Given these differences in background, SDSU programs may need to be modified and services adjusted. On the other hand, our current programs and services may already be geared for this "unique" SDSU freshman. University decisionmakers need to assimilate this data into their planning processes in order to formulate appropriate academic strategies.

Senior Survey Results

Two surveys were used to construct a profile of SDSU's graduating seniors: the ACT Student Opinion Survey (SOS) -- given in 1986, and the College Student Experience Questionnaire (CSEQ) -- given in 1987. Both

surveys provide background information on students and indicate their level of satisfaction with various university services, with areas such as "Rules and Regulations" or "Academics", and with personal growth.

Among SDSU graduating seniors, the male/female ratio is 51%/49%. Since the corresponding ratio for entering freshmen is 54%/46%, the implication of this difference is that, of the entering freshmen, a higher percentage of men than women will leave SDSU without completing degree. In fact, this implication is reinforced with the results of the admissions marketing analysis discussed below.

Interestingly, on the CSEQ, only 52% reported their age as 22 or younger, implying that either many students do not finish in 4 years or a significant number of students enter college at age 19 or older. However, the freshman survey above indicates that the vast majority of entering freshmen are age 18. Also, nearly one-fifth of these graduating seniors are married.

About one-half of these seniors expect to enroll in a graduate program. Yet, only 30% of the entering SDSU freshmen ranked preparation for graduate school as a reason for attending college. Clearly, some changes in perception have taken place. On might assume that the overall SDSU college experience is positive if a student desires further education. On the other hand, perhaps the profession demands an advanced degree of which the student was not aware initially.

Indeed, in terms of overall satisfaction with SDSU, over 85% of the seniors indicated they were "satisfied" or "very satisfied" with SDSU. When asked if they could start over again, would "they attend the same college?", 77% responded with "yes, definitely" or "yes, probably". All in all, the SDSU senior is satisfied with the environment and experiences here.

In 1986, when administered the SOS, seniors were also asked to indicate their level of satisfaction, on a scale of 1 to 5 (5=very satisfied), with 65 college services or programs. When compared to other institutions, the following SDSU services received an average score at least .30 higher than the national norm:

1. Library facilities and services
2. Food services
3. Out-of-class availability of instructors
4. Attitude of faculty toward students
5. Personal security/safety at SDSU
6. Athletic facilities
7. Study areas
8. Student union
9. Opportunities for personal involvement in campus activities

On the other hand, seniors scored the following services and programs at least .30 lower than national norms:

1. College-sponsored tutorial services
2. Financial aid services
3. Student voice in college policies
4. Rules governing student conduct at SDSU
5. Residence hall rules & regulations
6. Academic calendar
7. Racial harmony at SDSU

Although tests of significance were not conducted, these responses suggest areas for focus and program review by SDSU decisionmakers. Perhaps the positive scores show services that could be marketed or emphasized in college recruitment. The less positive responses may indicate a need for program or policy review.

ACT Assessment Scores

Background

The ACT Assessment instrument is a group of four academic tests (English, mathematics, social studies, and natural sciences) developed to assess general educational development and ability to compete in a college setting. Since entering freshmen are required to take the ACT test for admission, this instrument may provide useful insight into the academic readiness of our students.

The Blue Ribbon Panel, appointed in 1987 as part of SDSU's assessment plan, has identified 11 coherencies that a college graduate should possess. These abilities or coherencies range from critical thinking to aesthetic appreciation to commitment for service. Specifically, the Blue Ribbon Panel is studying the likelihood that SDSU's core curriculum provides growth in these coherencies. Part A of Report 3 correlates these eleven coherencies to the assessment instruments. Each question on the assessment instruments has been examined to determine which coherencies are assessed.

One of the premises for the Assessment Program Team's analysis is that these competencies are tested with the ACT Assessment. Also, since the BOR mandated the assessment of core curriculum areas in 1985, 40% of the sophomore students in spring 1987 were randomly selected to take a different form of the ACT Assessment again. This circumstance allows for comparisons of scores over time.

Summary of Results

Entering Freshmen. The mean ACT composite score for entering freshmen at SDSU is 21.5, almost 3 points above the national norm for entering freshmen. When compared with all freshmen at South Dakota BOR institutions, SDSU freshmen have a mean composite score that is 1.2 points higher. In fact, the average SDSU entering freshman had significantly higher scores for each of the four ACT tests when compared to all norming groups studied.

While there were significant differences in mean ACT scores among SDSU colleges, these scores should NOT be compared across colleges. Rather, regional and national comparisons with the appropriate college may be more meaningful. In this regard, the Engineering, Home Economics, and Pharmacy Colleges had average composite scores at least 3 points above the national average for their respective college.

Another interesting comparison involves matching the ACT scores of entering freshmen with their ACT scores at the end of their Sophomore year. Most students take core curriculum courses during their early college years, so this comparison may provide insight into student growth in the competencies adopted by the Blue Ribbon Panel.

Overall, there were significant differences in the incremental scores within each college. Student scores in the College of Home Economics increased by almost 2 points in both English and Math. On the other hand, there was no significant increase in the math scores for students in Ag & Bio Sciences. These differences may be due to the different skill levels of the entering students, the number of observations, the curricula of the colleges, and when students take core courses.

Admissions Marketing

This analysis was done in close cooperation with the Office of Admissions and used information from the ACT Assessment. Specifically, answers were sought for two questions: (1) Are there important differences among those students who graduate with a degree from SDSU and those who do not?, and (2) Are there educationally salient differences among the students from the different markets which SDSU seeks to serve?

The Assessment Program Team found that there were significant differences between those students who decided to return to SDSU for their sophomore year and those who did not. First, the disparity in ACT scores ranged from slightly more than one point on the Natural Science component to almost three points on the Math component. Second, 25% of the males, compared to only 16% of the females, did not return to SDSU after their freshman year. Finally, the dropout rate within each college at SDSU ranged from almost non-existent to over 25% for one college.

When the ACT Assessment scores were compared across the various recruitment regions, the only significant difference occurred, for the most part, in the Math scores. Students from South Dakota's West River region averaged two points below the other recruitment region averages, and students from North West Iowa averaged almost three points higher than regional averages.

Implications

SDSU's assessment program is in its infancy, but the potential for university planning processes is tremendous. The initial results from all of the above analyses provide baseline data which can be used for future trends and comparisons. No long-run conclusions are appropriate at this time. Rather, the results need to be carefully considered in the planning processes by SDSU administrators and faculty associated with the different streams of initiative. The accumulation of data in the years ahead will undoubtedly strengthen the results shown in this document.

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 1
Surveys

December, 1987

Kris Smith and Gary Steinley

Randy Hyman
Doug Malo
Mary Schmiesing
Ron Stover

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 1
Surveys
Part A: Introduction

December, 1987

Gary Steinley

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Mary Schmiesing
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INTRODUCTION:
SURVEYS AT
SOUTH DAKOTA STATE UNIVERSITY

Student surveys have been conducted at SDSU for decades, but recently the Assessment and Testing Office--in conjunction with a statewide assessment plan--has committed to a coherent plan for gathering survey information about students. At the present, this office focuses attention on two student populations: incoming freshmen and graduating seniors. In the future, continuing students, non-returning students, and alumni will also be included in surveys.

Survey information about freshmen is gathered from two major sources--the Cooperative Institutional Research Program (CIRP) and the ACT Assessment-Student Profile. Whereas the ACT is usually taken by students during their junior or senior years in high school, the CIRP is taken by incoming freshmen.

Likewise, survey information about graduating seniors is obtained from two sources--the ACT Student Opinion Survey (SOS) and the College Student Experience Questionnaire(CSEQ). Both of these are taken in the spring semester of the senior year, and both also allow for the addition of a specified number of locally-constructed items.

Why conduct surveys? Very simply, they produce information not provided by any other assessment devices such as aptitude or achievement tests. More specifically, the above four provide the following:

ACT ASSESSMENT-STUDENT PROFILE
This survey, taken as part of the ACT Assessment, provides information typically requested on college application forms: Proposed major, degree sought, housing needs, vocational plans, need for assistance in skill improvement, and interest in credit by exam or advanced placement. It also provides demographic data and high school background data about subjects studied and notable high school accomplishments.

CIRP
The CIRP provides demographic data as well as information about other student characteristics. For example, it contains questions about their reasons for going to college, their self-concept, their opinions about political and other issues, their personal values, and perceptions of their personal future.

SOS
The SOS contains five sections: Section I--background information; Section II--level of satisfactions with a wide range of college services and programs including such services as academic advising, library, financial aid, parking, and so on; Section III--level of satisfaction with various aspects of the college environment such as class size, availability of advisors, student voice in policies, study areas, registration procedures, racial harmony, and so on;

Section IV--up to 30 additional questions constructed at the testing site; Section V--written comments and suggestions concerning the college.

CSEQ

This survey also provides background information including study and work commitments in their senior year, but the primary section of this survey provides information about the frequency of student involvement in a wide range of college activities. For example, it contains questions about the extent of their involvement in activities related to the library, faculty, courses, the arts, the student union, athletics, organizations, and so on. In addition, the CSEQ contains two shorter sections providing information about what seniors think the college emphasizes and their estimate of what they gained from college. The CSEQ also allows apace for ten locally-constructed items.

Information such as the above, gathered systematically over time, can be relevant to a host of university concerns ranging from data needed for long-range planning to data needed for immediate questions about a particular campus issue. In addition, such collected information builds a data base for research concerning the SDSU student population and the university. The SDSU Assessment and Testing Office, therefore, is committed to the use of surveys as part of its total assessment program.

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 1
Surveys
Part B: Freshman Profile

December, 1987

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EXECUTIVE SUMMARY

During the Fall of 1986, SDSU participated in the Cooperative Institutional Research Program's (CIRP) freshman survey. SDSU was specifically interested in the survey to:

1. identify the degree to which our students are similar/dissimilar to other college freshmen across the United States;
2. evaluate the instrument's usefulness for admissions marketing, enrollment management, long-range planning, and program development;
3. acquire baseline data about our students' attitudes about themselves, their education, and the world around them; and
4. assess the survey's utility with other instruments and data in the assessment program.

Reasons for Attending College

The majority of Freshmen at SDSU in the Fall of 1986 were single, white, and had just graduated from high school. Their top three reasons for attending college (from eleven choices) were to get a better job, to make more money, and to learn more about things. These were the same for our national comparison group. However, SDSU freshman respondents rated the following reason much lower than the national population: to gain a general education, to prepare for graduate school, and to become cultured.

Their reasons for specifically attending SDSU also compared with the national norms, in order: good academic reputation, graduates get good jobs, and good social reputation. Yet, SDSU freshmen also emphasized the importance of receiving financial assistance and the institution's low tuition far more frequently than the students at the other universities.

Family Background

Many SDSU freshmen are first generation college students. Over one third listed their father's occupation as farmer and one third listed their mother's occupation as full-time homemaker. The low income of SDSU students' families is reflected in the high percentage of State students who receive financial aid.

High School Experiences

In terms of preparation for college, seventy-five percent of these SDSU freshmen graduated in the upper two-fifths of their high school class. However, when their years of study in particular areas were compared with the National Commission for Excellence in Education's recommendations, three areas of weakness emerged: foreign language, math and biological science. On the positive side, more SDSU freshmen had taken computer science and art/music than the comparison institutions.

Future Goals

Both SDSU respondents and the comparison group had similar views regarding the personal or professional objectives which they considered essential or very important. The two most frequently cited as important were: becoming an authority in one's field, be very well off financially. Few students, however, placed much value on objectives which would benefit society as a whole.

Self-Perception

Whether SDSU freshmen are more critical of themselves or less confident of their abilities' they consistantly ranked themselves lower than students in the norming group. Particularly large differences were found with the following attributes: foreign language ability; popularity; intellectual self-confidence; and self-confidence in social situations.

Views on Current Events

Finally, SDSU students tended to be more conservative in their responses to political, social, and moral issues than students at comparable institutions. Fewer State freshmen felt abortion should be legalized, fewer felt that a couple should live together before marriage, more thought the wealthy should pay more taxes, more thought homosexual relations should be prohibited and less felt that marijuana should be legalized.

INTRODUCTION

In response to a national initiative for excellence and accountability in higher education, South Dakota State University has embarked on an endeavor to assess the quality of its undergraduate experience.

This comprehensive assessment program is designed to enhance curriculum development/ program review and encompasses the general education component (core curriculum) as well as individual departmental programs. The assessment program is designed to assess 1) the students' acquisition of content knowledge, 2) the students' ability to tranfer this knowledge to other aspects of their lives (process knowledge), and 3) changes which have occurred in their attitudes, beliefs, and values during the time they are enrolled at State. In addition, the University collects information about the students' perceptions of their education.

The Assessment Program measures student attitudes, beliefs, values and perceptions through the use of surveys. SDSU has used a variety of surveys to profile students and evaluate programs and services. As SDSU acquires survey data it can begin to study the factors which influence change. For example, if through the use of student surveys the University can determine that students have increased their commitment to the overall good of society, then research can be conducted to identify those college experiences which contributed to this change (i.e. course activities, teaching methods, participation in service organizations, faculty contact, living in the residence hall). With this information, the University can adjust programs and courses to increase the experiences which encourage change.

SDSU is just beginning to acquire the baseline data necessary for this type of research. But some tentative hypotheses may be possible by looking at the survey results.

This paper reports on one survey instrument, the Student Information Form (SIF), which was used with incoming freshmen in the Fall of 1986 (Appendix A). The SIF is the freshman survey instrument of the Cooperative Institutional Research Program (CIRP). The CIRP is sponsored by the Amercian Council on Education and the Graduate School of Education at the University of California, Los Angeles.

The SIF was administered to incoming freshmen as part of the Assessment Program to: 1) identify the degree to which our students are similar to other college freshmen across the United States, 2) evaluate the instrument's usefulness for program review, long-range planning, admission marketing, enrollment management, 3) acquire baseline data about student attitudes about themselves, their education, and the world around them, and 4) assess the survey's utility with other Assessment Program instruments and SDSU's data base.

The results of the SIF have been valuable in acquiring a picture of SDSU freshmen and seeing how that picture compares with other students in similar institutions across the country. While this information is useful for planning, the greater benefit has come through the integration of this data with the results of other instruments (Stover et al., 1987).

For the purpose of this report, the results are reported in terms of percent of student responses. Comparisons with national norms are based on the differences or similarities of the percent of responses for freshmen at mediumly-selective public universities of comparable size (10 institutions, 21,607 participants). No tests for significance were performed for this report.

SURVEY RESULTS

In the Fall of 1986 the freshman class at South Dakota State University was primarily white and unmarried. Ninety-five percent had just graduated from high school the preceeding spring. While the number of non-traditional students, those who are over age twenty-three when they enter as freshmen, has increased at SDSU, they are under represented in this report. Less than two percent of the respondents indicated that they had graduated in 1983 or earlier.

Ninety-seven percent of the students responding to this survey stated that they plan to obtain a baccalaureate or higher degree and eighty-one percent planned to complete that degree at SDSU. The discrepency between students who stated on the survey that they plan to complete their degree at SDSU (81%) and the actual completion rate for SDSU students (about 50%) is significant. Research which could help identify the reasons for the thirty-one percent loss of students is needed to assist the University with retention efforts. The number of SDSU respondents who plan to persue a degree beyond the bachelor is much below the national average (37.2% and 61.4% respectively).

Reasons for Attending College

For most of thr incoming freshmen who responded to the survey, SDSU is the school they wanted to attend, with eighty-one percent stating that State was their first choice. Of these students, sixty-two percent stated that this was the only institution to which they had applied. This contrasts with thirty-two percent nationally who indicated that they only applied to the institution they were attending. An additional fourteen percent stated that SDSU was their second choice.

Further research to identify the factors which contribute to the high number of students who choose SDSU as their only choice (i.e. tuition, financial aid, geography, career choice) could prove useful for marketing and planning.

SDSU students cited the same reasons for attending college as other freshmen nationally. Table 1 illustrates the reasons given for college attendance.

The most frequently cited reasons for selecting SDSU were again consistant with those of the comparison group. Yet for SDSU students, low tuition and the fact that they received financial aid were more often indicated as reasons for attending this particular institution than was the case nationally. The reasons listed on the survey are listed in Table 2.

Table 1. Reasons for Attending College.

Reason	SDSU Rank	SDSU %	Nat'l* Rank	Nat'l* %
Get a better job	1	82.2	1	83.3
Make more money	2	69.4	3	70.6
Learn more about things	3	69.2	2	72.9
Gain a general education	4	47.6	4	60.7
Prepare for graduate school	5	30.8	5	46.4
Improve reading/study skills	6	26.4	6	33.1
Become cultured	7	21.4	7	32.2
Parents wanted me to go	8	13.9	8	15.8
Wanted to get away from home	9	11.0	9	11.9
Nothing better to do	10	2.9	10	2.0
Couldn't find a job	11	2.0	11	1.8

Table 2. Reasons for Attending SDSU.

Reason	SDSU Rank	SDSU %	Nat'l* Rank	Nat'l* %
Good academic reputation	1	59.3	1	64.4
Grads get good jobs	2	47.4	2	48.5
Good social reputation	3	33.2	3	37.9
Low tuition	4	31.7	5	20.8
Offered financial assistance	5	21.5	8	11.6
Offered special educational prog.	6	21.1	6	18.3
Grads go to top grad schools	7	18.3	4	24.5
Wanted to live near home	8	12.4	7	12.5
Friend suggested	9	6.9	9	7.7
Counselor advised	10	5.3	11	5.5
Relative wanted me to come	11	4.6	10	5.6
Athletic department recruited	12	3.3	14	2.3
Not offered aid at first choice	13	3.0	12	4.0
Teacher advised me	14	2.5	13	2.7
College rep recruited	15	1.9	15	1.7

*Refers to SDSU's comparison group.

Family Background

The majority of SDSU respondents come from families with four or fewer children at home, yet thirty-one percent of State students come from larger families. Eighty-six percent of the SDSU sample indicated that they live with both parents. Nationally seventy-eight percent indicated the same. Approximately two thirds of SDSU freshmen do not have other siblings currently attending college.

The educational level of the parents of SDSU freshmen does differ somewhat from the national averages. Only thirty-one percent of the fathers of SDSU students have completed a bachelor degree or higher, while nationally fifty-six percent of the fathers have achieved at least the bachelor degree. For mothers, twenty-nine percent of SDSU students and thirty-nine percent of the national sample have a mother with a college education. Also, in contrast to the comparison group, more mothers than fathers of SDSU students had pursued some form of post secondary education, but it was the fathers of these students who had a higher completion rate.

The occupations of the parents of the SDSU sample also varied from the comparison group as illustrated in Table 3 and Table 4. It's interesting to note the low percentage of engineers in the SDSU results. This may be indicative of the limited industry in the state.

Table 3. Father's Occupation.

Father's Occupation	SDSU Rank	SDSU %	Nat'l* Rank	Nat'l* %
Farmer or Forester	1	35.4	12	2.1
Businessman	2	20.3	1	37.3
Skilled worker	3	6.6	3	7.5
Education (secondary)	4	4.7	4	3.8
Semi-skilled worker	5	3.7	5	2.8
Engineer	6	3.2	2	10.7
Laborer (unskilled)	7	2.6	9	1.7
Unemployed	10	0.9	10	1.6

Table 4. Mother's Occupation.

Mother's Occupation	SDSU Rank	SDSU %	Nat'l* Rank	Nat'l* %
Homemaker (full-time)	1	31.3	1	19.1
Business (clerical)	2	10.5	3	12.1
Businesswoman	3	10.2	2	14.7
Nurse	4	8.2	4	7.4
Education (primary)	5	6.4	5	7.3
Semi-skilled worker	6	3.8	8	2.3
Laborer	7	2.6	11	1.3
Unemployed	8	2.3	6	5.1

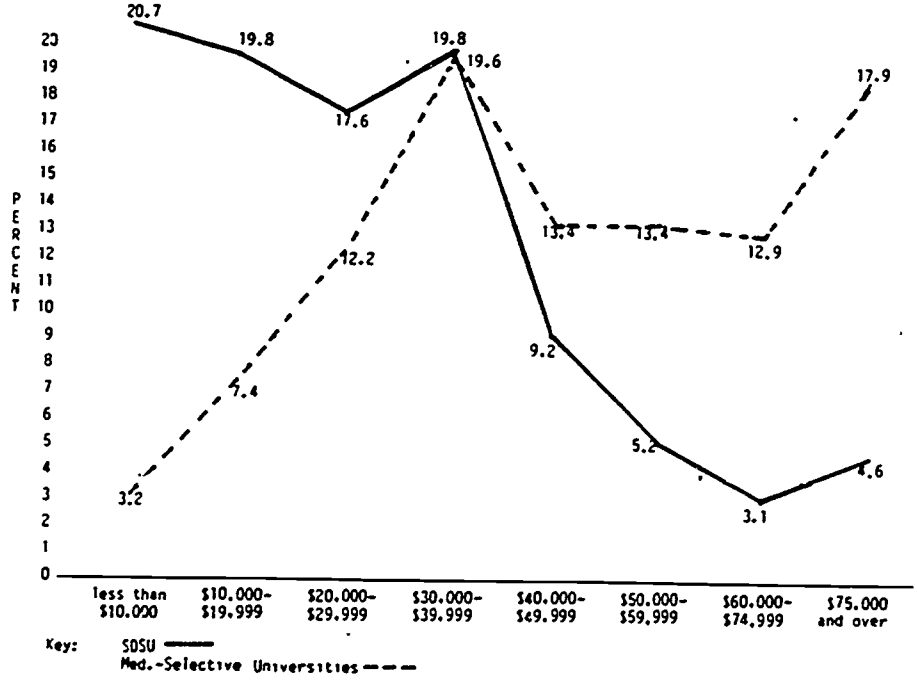
*Refers to SDSU's comparison group.

The family income level of SDSU students varies greatly from students in comparable institutions. The majority of our students come from homes with a student-reported annual income of $35,000. or less, while just the opposite is the case for the comparison group. The majority of students in the norming group have family incomes of $35,000 or more. In addition, one third of the SDSU students surveyed come from one income families. Figure 1 illustrates the comparison of parent income levels.

One should also note the high percentage of parents who are self-employed (i.e. farmers, some businessmen and women). This group may contribute to the low family income for a variety of reasons including: 1) allowable deducations for tax purposes differs markedly between farmers/business owners and those employed by others, and 2) the poor farm economy.

The survey results seem to indicate a correlation between low family incomes, a reduced level of financial assistance from parents and the higher level of financial aid obtained through government supported programs. SDSU students also seem to have a greater concern regarding the financing of their education than do students generally. Eighty-five percent of the SDSU respondants indicated that they had at least some concern about financing their college education, while only sixty-one percent made that statement at comparable institutions. Table 5 itemizes some of the more frequent sources of financial aid for SDSU respondents.

Figure 1. Family Income.



To illustrate the high percentage of SDSU students who receive financial aid in comparison to the norm group, the following information is presented:

1. Only two-thirds of the respondents from State indicated they are receiving financial assistance from their family compared with eighty-five percent nationally.
2. SDSU awarded Pell Grants to thirty-six percent of their students while other institutions awarded grants to about ten percent.
3. Eighteen percent of the SDSU students surveyed are on work-study compared to only six percent nationally.
4. Thirty-nine percent of our students receive Federal Guarenteed Student Loans and sixteen percent receive National Direct Student Loans. For the comparison group, the figures are twelve percent and five percent respectively.

Table 5. Sources of Financial Support.

Personal or Family Resources:	Parental Aid	Savings from Summer work	other savings	Full-time Job while in College	Part-time Job while in College
None	33.0	32.4	62.9	98.6	68.0
$1 - $499	19.4	31.1	15.3	0.1	21.5
$500 - $999	11.7	19.0	7.3	0.1	8.3
$1000 - $1499	10.3	9.3	5.8	0.0	1.4
$1500 - $1995	5.3	4.7	3.9	0.0	0.4
$2000 - $3000	7.8	2.0	2.7	0.0	0.1
Over $3000	12.6	1.6	2.1	0.1	0.1

Aid which need not be repaid:	Pell Grant	SEOG	State Scholar. or Grant	Work-study	Other College Grants
None	64.1	90.4	88.7	82.5	80.2
$1 - $499	5.7	6.7	8.1	6.0	10.8
$500 - $999	7.3	2.7	2.1	10.8	4.3
$1000 - $1499	7.1	0.0	0.7	0.6	2.3
$1500 - $1999	9.4	0.1	0.1	0.1	1.7
$2000 - $3000	6.4	0.0	0.1	0.0	0.4
Over $3000	0.0	0.0	0.0	0.0	0.3

Aid which must be repaid:	FGSL	NDSL	Other College Loan	Other Loan
None	60.6	83.9	97.9	95.0
$1 - $499	1.9	1.3	0.4	0.7
$500 - $999	4.1	4.7	0.4	1.3
$1000 - $1499	10.3	7.6	0.6	0.6
$1500 - $1999	13.1	2.4	0.1	0.7
$2000 - $3000	10.0	0.1	0.4	0.9
Over $3000	0.0	0.0	0.1	0.9

High School Background

SDSU freshmen tended to be active students in high school and above average academically. Slightly over half of this group was in the upper

fifth of their high school graduating class and an additional on-fourth was in the upper two-fifths. Eighty-four percent of the SDSU respondents has a high school grade average of "B" or higher over the four years.

The SIF asked students to report the number of years they had studied in selected courses. Their responses were compared to the number of years of study recommended by the National Commission on Excellence in Education (Table 6). Overall, SDSU compared favorably with the national comparison group and had a fairly high level of compliance with the recommendations. Yet, very few SDSU students met the preparation minimums in foreign language (twenty-eight percent) and many were weak in their natural science preparation.

After this group of freshmen entered SDSU, new admissions requirements were established which require that specific high school course work be completed for admission. It is suggested that the CIRP results for this group be compared with the students who responded to the same survey in the Fall of 1987, to determine the impact of these new requirement.

Table 6. High School Courses Taken.

Course (recommended years of study)	SDSU%	Nat'l% *
English (4 years)	94.8	96.6
Mathematics (3 years)	82.3	95.7
Foreign Language (2 years)	27.7	87.1
Physical Science (2 years)	65.6	62.6
Biological Science (2 years)	48.0	36.7
History or Am Gov't (1 year)	99.1	99.4
Computer Science (1/2 year)	83.9	68.3
Art or Music (1 year)	72.5	58.4

*Refers to SDSU's comparison group.

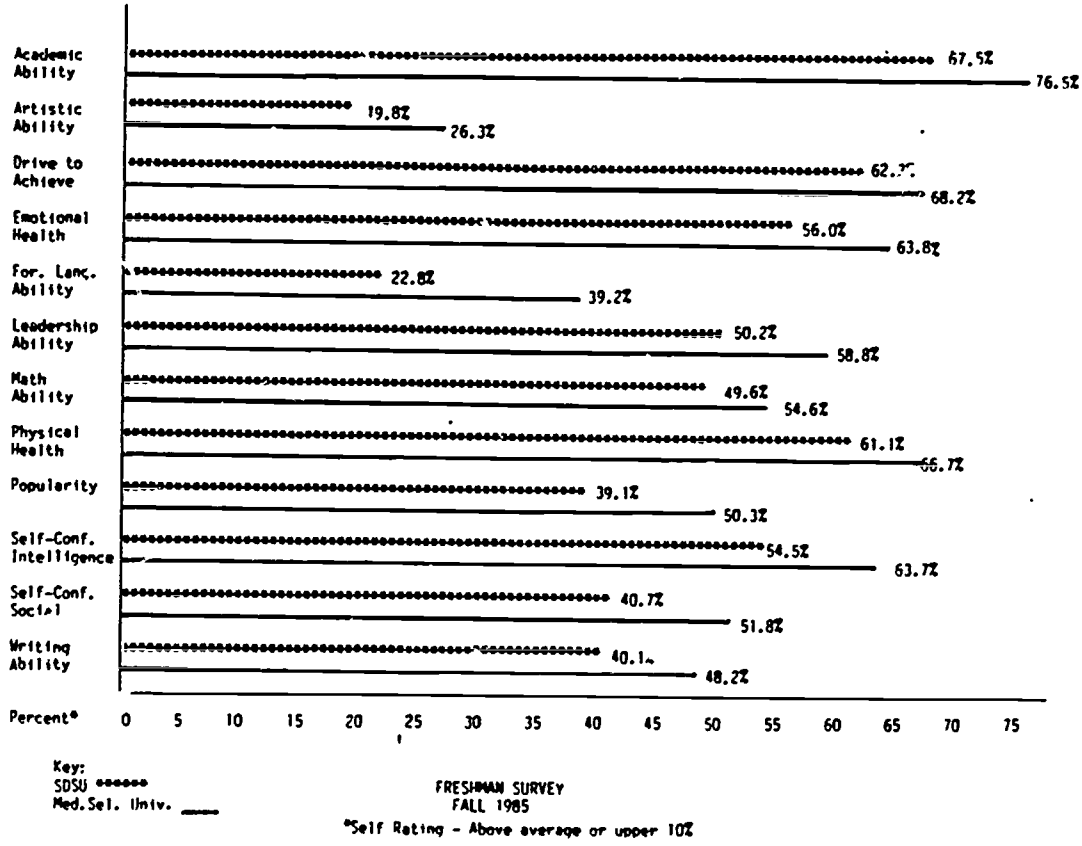
SDSU students participated in a variety of activities during their senior year in high school. In fact, compared to the national group, a greater percentage of SDSU students were school leaders/officers, lettered in varsity sports, played musical instruments, had a major role in a play, wrote a computer program, edited a school paper or yearbook, were guests in teacher's homes, completed their homework on time, and attended a religious activity. Further study could indicate whether this correlates with the size of the high school. Also, more of our students drank beer.

On the other side of the coin, a smaller percentage of State students tutored another student, did extra classwork/reading, overslept, or felt overwhelmed. The percentage of the SDSU sample who participated in debate, entered a science contest, performed volunteer work or attended a concent was comparable to the national comparison group.

Self-Perception

While SDSU students are as involved in activities as other college freshmen, they tend to be more critical of their personal attributes. Further study is indicated to determine if their overall self-concept is indeed less positive then comparable freshmen at other institutions and/or if it indicates that the emphasis on humility as a value is stronger in the midwestern United States. Figure 2 below illustrates the percent of students who indicated that they felt they were either above average or would rank in the highest ten percent of students for that particular attribute.

Figure 2. Self-reported Atributes



Future Events and Goals

Students were also asked to estimate the likelihood that an event related to their future would occur. The ten events most frequently cited as having a "very good chance of occurring" are listen in Table 7.

A large number of students both locally and on other campuses do not enter college with a very positive attitude. Specifically, only fifty-three percent of the SDSU respondents and fifty-eight percent in the norming group felt they would be satisfied with college. This leaves roughly half of the students who anticipate not being satisfied with college. Additional research is indicated to determine the attrition rate of these students and to see if student attitudes change as they progress through their first semester of college.

Another factor to be considered in attrition studies is the higher number of SDSU students who plan to transfer to another college: eleven percent for SDSU and just under six percent for the comparison group. This difference may have an influence on the large number of students who only apply to SDSU. Our students may enter SDSU with the express purpose of transferring after the first year or two.

In Table 7, one can notice that fewer of SDSU freshmen felt they would make at least a "B" average in college. Further research is indicated to determine if this is a result of a lower self-evaluation of ability, a reflection of the students' preceived high preparation, or other factors. Also, more of State respondents anticipate marrying within a year of college. This is consistent with senior survey results which indicate that SDSU has a higher than average number of students who marry prior to graduation (Steinley et al., 1987).

Table 7. Future Events.

Event	SDSU Rank	SDSU %	Nat'l* Rank	Nat'l* %
Get bachelor degree	1	79.0	1	81.1
Find a job in own field	2	71.4	2	72.4
Be satisfied with college	3	53.0	3	58.2
Get job to pay college expenses	4	44.5	5	37.4
Make at least a "B" average	5	39.5	4	45.3
Get tutoring in some courses	6	21.8	8	16.4
Marry within a year after college	7	18.0	10	13.7
Change major field	8	14.8	7	17.5
Change career choice	9	13.0	9	16.2
Transfer to another college	10	11.3	18	5.7

*Refers to SDSU's comparison group.

Both SDSU respondents and the comparison group had similar views regarding the personal or professional objectives which they considered essential or very important. The most frequently cited objectives tended to lean more toward personal goals. Few students placed much value on

objectives which would benefit society as a whole. Below are the six most highly valued objectives of SDSU freshmen. These objectives were selected by fifty percent or more of the respondents in both groups.

1) becoming an authority in one's field,
2) be very well off financially,
3) raise a family,
4) help others in difficulty,
5) obtain recognition from colleagues,
6) be successful in own business.

Social, Political, Moral Views

The SIF presented students with a variety of statements which dealt with social, political, or moral issues, and the respondents were asked to indicate whether they agreed or disagreed with the statement. Overall, SDSU students tended to be more conservative in their responses than were those in the comparison group. Yet interestingly, when asked to label their political views, the majority of SDSU students indicated that they were "middle of the road", with only twenty percent considering themselves either "conservative" or "far right" and sixteen percent who labeled themselves "liberal" or "far left".

The issues which indicated the most noticeable differences between SDSU freshmen and their counterparts on other campuses were most often moral issues. For instance, not surprisingly, more of our students felt homosexual relations should be prohibited, that living together before marriage was not advisable, and that abortion and marijuana should not be legalized. The complete list of issues is contained in Table 8.

It is interesting to note that the students' views on whether the wealthy should pay taxes seems to reflect to some degree their incomes levels with a higher percentage of State freshmen indicating that this should occur.

In reviewing the data on these issues, the students' experiences must be considered. For instance, twelve percent more of our freshman said that busing was appropriate to achieve racial balance in schools. Their response may be influenced by the large number who had ridden buses to school throughout their elementary and secondary education and by their limited exposure to minorities and large cities.

Table 8. Social, Political and Moral Issues.

Statement	SDSU% agree	Nat'l%* agree
Gov't not protecting consumers	53.5	57.7
Gov't not promoting disarmament	62.3	65.5
Gov't not controlling pollution	71.6	77.9
Gov't should discourage enery use	64.3	70.7
Raise taxes to reduce deficit	25.9	26.5
Increase fed military spending	21.5	25.7
Nuclear disarmament attainable	54.4	53.1
Abolish death penalty	24.9	22.5
Need national health care plan	49.9	56.8
Abortion should be legalized	51.2	65.9
High school grading too easy	46.5	50.7
Women's activities best in home	14.4	17.8
Live together before marriage	40.5	54.1
Women should get job equality	93.4	94.0
Wealthy should pay more taxes	83.7	71.3
Marijuana should be legalized	15.7	22.8
Busing OK to achieve balance	61.7	50.2
Prohibit homosexual relations	57.8	46.0
College regulate stud. off-campus	5.9	8.2
Students help evaluate faculty	78.0	75.3
College has right to ban speaker	26.5	21.8
College divest S. Africa invest.	52.7	50.0
College increases earning power	72.9	68.6

*Refers to SDSU's comparison group.

RECOMMENDATIONS FOR FUTURE STUDY

The results contained in this study only reflect a sample of the Fall 1986 freshmen class at SDSU. More long term research is indicated. The instrument has now been administered to approximately fifty percent of the Fall 1987 entering freshmen class. Comparison of these two groups is indicated to determine the level of similarity between them. In addition, a comparison of the 1986 and 1987 freshmen respondents will give SDSU the first set of data which will enable the institution to evaluate the effects of the new admission standards. These standards require students admitted to SDSU to have completed specific course requirements in their high school curriculum.

Additional reseach which would allow colleges and possibly departments to compare their students' responses to those of the university population is currently being considered. The Assessment and Testing Office has received requests for this information from colleges, departments and administrative offices with the intent being program review and accreditation studies.

This survey will serve as baseline data for future research. The Assessment and Testing Office will begin to look at factor which contribute to student development as more data becomes available.

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APPENDIX A

Procedure

During the Fall of 1986, South Dakota State University participated in the Cooperative Institutional Research Program (CIRP) freshman survey. This survey is part of a continuing longitudinal study of the American higher education system sponsored by the American Council on Education (ACE) and the University of California, Los Angeles. The program, which began in 1966, also includes two- and four-year follow-up surveys and a faculty survey. "The principal purpose of the CIRP is to assess the effects of college on students." (Astin, et al., 1986).

South Dakota State University used the Student Information Form (SIF), the CIRP freshman survey instrument, to evaluate its usefulness in the Assessment Program. In addition, SDSU was interested in the survey: 1) to identify the degree to which our students are similar/dissimilar to other freshmen across the United States, 2) to evaluate the instrument's usefulness for admissions marketing, enrollment management, long-range strategic planning, and program development, 3) to acquire baseline data about student attitudes about themselves, their education, and the world around them, and 4) to assess its utility with other instruments and data in the Assessment Program.

During the first week of classes for the 1986 Fall Semester, incoming freshmen were asked to complete the SIF. For those students living in the residence halls, the survey was distributed via the Residence Assistants (RA's). Students living off campus received their survey through the U.S. Postal Service. On-campus students were asked to return their complete surveys to their RA's, while off-campus students were asked to return their completed surveys to one of two campus locations, the Information Desk in the Student Union or the Admissions Office, Administration Building Room 200. Of the 1200 surveys distributed, 746 were returned, resulting in a 60% return.

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 1
Surveys
Part C: Senior Profile

December, 1987

Gary Steinley

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EXECUTIVE SUMMARY

Two survey instruments, the ACT Student Opinion Survey (SOS) which included locally-constructed sections and the College Student Experience Questionnaire (CSEQ), were used as the data source for this Profile. The SOS was conducted in the spring of 1986, the CSEQ in April, 1987. Although some of the data from each overlaps, they primarily yield different kinds of information. The SOS focuses on the seniors' level of satisfaction with various university services; the CSEQ on the extent and quality of their senior experiences. This Profile contains an introduction and five sections describing (1) general information about the SDSU seniors surveyed, (2) the extent of their satisfaction with SDSU programs, (3) their view of what they gained from SDSU, (4) the kind and quality of their experiences at SDSU, and (5) data relevant to the core curriculum and student stress. Although—given the nature of a Profile—there are no formal conclusions to this report, some general observations could be made.

(1) These seniors were a fairly homogeneous group. The main factors which dispersed them were their choices of majors and their occupational choices. (2) The seniors surveyed tended to be satisfied or very satisfied with most of the programs at SDSU. On the SOS only four of the sixty-five items had means (on a five point scale) below 3.0: Parking facilities and services, student voice in college policies, residence hall rules and regulations, and use of activity fees. In contast eleven had means of 4.0 or greater with the highest being their level of satisfaction with the library (4.45), the recreational/intramural services (4.33), and the athletic facilities (4.28). (3) The seniors' views of what they gained from SDSU is more open to interpretation, but in general they appear quite confident about what they had gained relevant to their areas of specialization. In contrast, they were less confident about their understanding of such general education areas as art, music, and literature. (4) As for the kind and quality of their experiences at SDSU, a summary statement reflects even more interpretation. However it is the view of this author that in many categories the "higher quality" experiences often received lower ratings than other experiences. For example, in the category of "Course Learning" students reported a high freguency of taking detailed notes in class and listening attentively; they less frequently engaged in such study stategies as explaining material to another student or outlining their class notes and readings.

Finally it should be noted that this Profile does not include all of the data resulting from the two surveys, nor does it begin to exhaust the possible avenues for examining that data. Indeed one purpose of the survey is to generate further uses of this and other data available though the Assessment and Testing Office.

INTRODUCTION

The purpose of this Profile is to provide faculty, administrators, and others with a general picture of seniors graduating from SDSU--at least a picture as offered by two recent surveys of graduating seniors. More specifically this Profile is intended to provide:

(1) Responses to specific questions asked by representatives from Student Affairs, General Registration, the CAP Center, the library, faculty senate, and the Student Association. The results reported here will not answer all of their questions; but, coupled with information from other assessment instuments, we hope to provide reasonably complete responses.

(2) Information which may be relevant to the planning and decision-making of various groups on campus, such as the Blue Ribbon Panel's current deliberations about core requirements.

(3) Indications of the kind of information which can be gained from future surveys at SDSU.

We also hope that this Profile generates other questions from those who read it. If so, some answers will undoubtedly be available through further analysis of existing data; others may not. But those questions that can't be answered now will provide directions for future surveys.

All of the information used in this Profile comes from two surveys: the ACT Student Opinion Survey (SOS) and the College Student Experience Questionnaire (CSEQ). The SOS contains three sections and a fourth in which up to 30 locally-constructed questions can be added. The first section asks for background information; the second for students to indicate their level of satisfaction with twenty-three different university services; and the third for their level of satisfaction in other areas such as "Academics" and "Rules and Regulations." In addition, the fourth section of the SDSU survey contained thirty questions which were constructed by a statewide committee and included on the surveys given across the state that year. The SOS reported in this Profile was conducted in the spring of 1986. Surveys were mailed to all graduating seniors and were returned by 232 of them for a return rate of about 40%. The survey included, in addition to the four sections described above, four additional questionnaires that were randomly distributed in the mailing.

The second survey, the College Student Experience Questionnaire (CSEQ), primarily contains sections asking seniors the frequency of their college activities. These activities are divided into such categories as "Library Experiences" and "Experiences in Writing," and students are asked to rate statements under each category on the basis of how frequently they engaged in the action described by the statement. In addition the CSEQ contains two other major sections--one on which students rate the extent to which they think SDSU emphasized certain

characteristics, such as academic, creative, and so on, and the other on which students estimate the progress they have made in a variety of areas. The CSEQ reported in this Profile was conducted in April, 1987. It was mailed to a sample of graduating seniors (450 students) and 241 were returned for a return rate of about 54%.

This Profile is divided into five sections as outlined in the Table of Contents. The first section provides general background information about the SDSU seniors surveyed. Sections 2-4 offer responses to the questions asked by the campus representatives mentioned at the beginning of this Profile. In these sections the movement is from the most general and commonly asked question (How satisfied are students with SDSU?) in section 2, to the next most frequently asked question in section 3 (How did they grow as a result of their time here?), to questions about their SDSU experiences in section 4. Section 5, the final section, contains information which may be relevant to various groups and activilties on campus.

CHARACTERISTICS OF SDSU SENIORS

Although there is obviously no such thing as a "typical senior," surveys do provide a general view of a given population. What follows is such a view as provided by the seniors who completed the two surveys. Since both the SOS and the CSEQ ask for similar background information, the CSEQ was chosen as the primary data base for this section. When SOS data is used, it will be labeled as such. Except in the Tables, all percentages have been rounded to the nearest whole number. Since, strictly speaking, the primary data represents only 241 graduating seniors in 1987, care should be taken when extending these characaterisitics to other groups of SDSU seniors.

When asked for what purpose they entered college, 95% of those who returned the SOS indicated it was to get a B.S. degree. A degree in what? They indicated the following as their college majors (percentages rounded to the nearest tenth):

Table 1. Majors Reported on SOS

Reported Major	Percentage
Agriculture	21.6
Architecture	1.3
Biol. Sciences	5.6
Business/Commerce	5.6
Communications	2.6
Computer Science	0.9
Education	6.9
Engineering	12.1
Applied/Fine Arts	1.3
Health Profesns	12.5
Home Economics	6.0
Letters	1.3
Mathematics	3.0
Physical Sciences	4.7
Social Sciences	10.8
Community Services	0.4
Trade/Technical	1.3
General Studies	0.4
Blank/Undecided	1.7

On the CSEQ the majority of the seniors (52%) reported their age as 22 or younger. Only 12% were 28 or older. The majority were males, but only by a small margin—51%/49%. Likewise the majority were single, but in this case the margin was much greater with 82% of these seniors reporting themselves as single. Most (72%) entered college here at SDSU with the other 28% transferring in. 94% reported themselves as full-time students. Table 2 offers their view of how much time they spent "being

students." When asked how many hours per week they usually spent on activities related to school work, they responded as follows:

Table 2. Hours Per Week on Classes & Studies

Hours per Week	Percentage
Less than 20	5.0
About 20	13.7
About 30	29.9
About 40	30.3
50 or more	21.2

Of course these SDSU seniors did more than attend class and study. Most of them (71%) also had outside employment while school was in session. Table 3 provides a more specific view of their job-related work.

Table 3. Hours Per Week on Outside Job

Hours per Week	Percentage
Not employed	29.0
10 hours or fewer	22.9
About 15	17.0
About 20	19.9
About 30	5.8
30 or more	5.4

It should be noted that the total employment figure of 71% contrasts with that of the 1986 SOS in which 46% of the seniors indicated that they worked 0 hours per week or did only occasional odd jobs. It's possible that the 71% employment rate indicated by the 1987 CSEQ is not typical of other groups of graduating seniors. It's also possible that future surveys may reveal a pattern of increasing hours of employment among students.

Besides outside employment, these seniors used other sources to finance their college education. Whereas 66% of them claimed that they had received "none or very little" help with their college expenses from their parents or family during that year, the rest indicated that they had received help. 12% reported that they received less than half of their college expenses from parents or family; 8% receive more than half; and 14% received all or nearly all. Help was also received from financial aids such as scholarships, grants, and work-study awards. Although the CSEQ provides no data on this factor, the 1986 SOS indicates 71% of the students had received some type of financial aid, a figure which corresponds almost exactly with the percentage of seniors throught the state who reported receiving financial aid that year.

Only a few of these seniors (3%) lived with parents or relatives. Similarly only a few (5%) lived in sorority or fraternity houses. Most (76%) lived in apartments, houses, or rooms, and the rest lived in dormitories or other college housing. The majority of these seniors were probably first-generation college students—that is 62% of them indicated that neither of their parents had graduated from college. Of the remaining, 13% indicated their mother had graduated, 13% their father, and 12% both. As for their own future educational plans (after they graduate from college), about half (49%) indicated they expected to enroll for a more advanced degree. As for their future occupational plans, their responses were as follows (Since the CSEQ contains no questions about occupational choices, the SOS was used for these percentages.):

Table 4. Occupational Choices Reported on SOS

Occupation	Percentage
Agriculture	18.5%
Architecture	1.3
Biological Sciences	1.3
Business/Commerce	8.2
Communications	3.0
Computer Science	2.6
Education	10.8
Engineering	9.9
Health Professions	18.1
Home Economics	4.7
Letters	2.2
Mathematics	.9
Physical Science	2.2
Community Service	3.0
Social Sciences	4.3
Trade/Technical	1.7
Blank/Undecided	6.0

In summary, it seems that these seniors were a fairly homgeneous group. From an informal analyis of the data, it seems that the main factors which dispersed them were their choices of majors and their occupational choices. To the extent that the students who completed these two surveys represent the larger population of SDSU seniors, seniors on this campus have much in common with one another.

LEVEL OF SATISFACTION

The most frequently asked questions (by representatives of those groups mentioned in the introduction) centered around the extent to which our students are satisfied/dissatisfied with the education and services they received at SDSU. Both the CSEQ and the SOS ask that as a single general question, and the results are positive. Asked (on the CSEQ) how "well they liked college?" 78% indicated that they liked it or were enthusiastic about it. Asked, if they could start over again, would "they attend the same college?" 47% indicated "yes, probably" and 30% responded by marking the "yes, definitely" box. More to the point, the final question of the SOS—the extent of satisfaction with "this college in general"—received the following responses:

Table 5. Overall Satisfaction with SDSU

Very Sat.	Satisfied	Neutral	Dissat.	Very Dis.
25%	62.1%	8.6%	3%	1.3%

It might be added that on this question the SDSU mean score of 4.06 (Very Satisfied = 5) contrasts with a national public college mean of 3.92. (The validity of the comparison may be challenged because the nationwide data were gathered from a more diverse population of approximately 35,000 students surveyed over a wider period of time.)

However, more specific indices of students' levels of satisfaction are needed. Toward this end the SOS contains 65 items which are measured on the 5-point satisfaction scale outlined above. Table 6 below summarizes the seniors' mean responses to those items (column 1) compared with the the mean responses of approximately 35,000 students (all levels, not just seniors) in public colleges across the nation. The sections and sub-section divisions in the table, underlined for clarity, correspond with the format of the SOS.

Table 6. Level of Satisfaction with College Services and Environment

Item	SDSU	Nation
COLLEGE SERVICE OR PROGRAM		
1. Academic advising services (176)	3.46	3.63
2. Personal counseling services (47)	3.89	3.86
3. Career planning services (152)	3.63	3.72
4. Job placement services (138)	3.49	3.53

(Table Continued)

Item	SDSU	Nation
5. Rec. and intramural programs and services (201)	4.33	4.11
6. Library facilities and services (231)	4.45	4.03
7. Student health services (198)	3.68	3.63
8. Student health ins. program (50)	3.53	3.50
9. College-sponsored tutorial service (17)	3.50	3.84
10. Financial aid services (170)	3.39	3.72
11. Student employment services (65)	3.80	3.82
12. Residence hall services and programs (190)	3.61	3.52
13. Food services (220)	3.32	2.99
14. College-sponsored social activities (170)	3.72	3.69
15. Cultural programs (106)	3.97	3.90
16. College orientation program (171)	3.65	3.77
17. Credit-by-exam. program (89)	3.87	3.80
18. Honors program (28)	3.64	3.87
19. Computer services (163)	3.54	3.55
20. College mass transit services (5)	3.40	3.61
21. Parking facilities and services (216)	2.40	2.68
22. Veterans services (5)	4.00	3.87
23. Day care services (0)	0.00	3.74
ACADEMIC:		
1. Testing/grading system	3.77	3.68
2. Course content in your major field	3.69	3.82

(Table Continued)

Item	SDSU	Nation
3. Instruction in your major field	3.73	3.81
4. Out-of-class avail. of your instructors	4.15	3.77
5. Attitude of faculty toward students	4.03	3.84
6. Variety of courses offered by college	3.82	3.68
7. Class size relative to type of course	4.19	3.95
8. Flexibility to design your own program	3.53	3.59
9. Availability of your advisor	3.83	3.66
10. Value of information provided by your advisor	3.31	3.54
11. Preparation you are receiving for fut. occup.	3.58	3.63
ADMISSIONS		
12. General admissions procedure	3.55	3.55
13. Avail. of fin. aid info. prior to enrolling	3.28	3.41
14. Accur. of college info. received before enrolling	3.71	3.64
15. College catalog/admiss. publications	3.87	3.81
RULES AND REGULATIONS		
16. Student voice in college policies	2.80	3.12
17. Rules gov. student conduct at this coll.	3.07	3.40
18. Res. hall rules & regulations	2.57	3.13
19. Academic pro. & suspension policies	3.33	3.38
20. Purposes for which student activity fees are used	2.79	3.02
21. Personal security/ safety at this campus	3.92	3.51

(Table Continued)

Item	SDSU	Nation
FACILITIES		
22. Classroom facil.	3.75	3.76
23. Laboratory facil.	3.36	3.65
24. Athletic facil.	4.28	3.77
25. Study areas	4.03	3.68
26. Student union	4.10	3.64
27. Campus bookstore	3.55	3.55
28. Avail. of student housing	3.83	3.75
29. General cond. of bldgs. & grounds	4.07	3.75
REGISTRATION		
30. General reg. procedures	3.17	3.28
31. Avail. of courses you want at times you can take them	3.09	2.94
32. Academic calendar for this college	3.05	3.67
33. Billing & fee payment procedures	3.64	3.54
GENERAL		
34. Concern for you as an individual	3.37	3.35
35. Attitude of non-teach. staff toward students	3.49	3.47
36. Racial harmony at this college	3.15	3.57
37. Opportunities for student employment	3.31	3.25
38. Opportunities for personal involvement in campus activites	3.99	3.67
39. Student government	3.35	3.24
40. Relig. activities & programs	3.65	3.43
41. Campus media (student newspaper, radio, etc.)	3.70	3.56
42. This college in general	4.06	3.92

* 1-23. Level of satisfaction with college

service or program. The N of each SDSU group (in parentheses) varies depending upon the number of those who had actually used the service.

In comparing the ratings of SDSU students with those of students in public colleges across the nation, one finds several areas in which significant differences appear to exist. However it should be kept in mind that levels of significance are not indicated in the table. Although they are available, their use would seem questionable given the major differences between the two populations and the methods of gathering data. This caveat is not meant to attenuate the value of comparisons, only to highlight the limitations of the data.

STUDENT GROWTH

The next most frequently asked questions pertained to such matters as how students develop and change as a result of their years at SDSU. Although neither of the surveys measures student achievement, each (plus some of the state and locally-constructed questions) contains sections and/or items asking for students' perceptions of themselves. The two tables of this section summarize those perceptions.

The first table, Table 7, "Estimate of Gains," was constructed from a twenty-one item section of the CSEQ. The table includes the items and the means for each; in addition it displays the percentage of student responses over four values ranging from gained "very much" to gained "very little." Table 8, "Perceived Capability," is based on the first thirteen questions of the state-constructed section of the SOS on which students were asked how capable they felt in various areas. The table lists the items and contains the mean responses of SDSU seniors.

Table 7. Estimate of Gains (Students were instructed: "In thinking over your experiences in college up to now, to what extent do you feel you have gained or made progress in each of the following respects?")

Item 1: Vocational training--acquiring knowledge and skills applicable to a specific job or type of work.				
Responses:	Very much	Quite a bit	Some	Very little
(N=241) %	29.0	42.3	24.9	3.7
M=3.0				
Item 2: Acquiring background and specialization for further education in some professional, scientific, or scholarly field.				
(N=241) %	27.0	46.5	23.7	2.9
M=3.0				
Item 3: Gaining a broad general education about different fields of knowledge.				
(N=241) %	17.0	48.1	29.9	4.1
M=2.8				
Item 4: Gaining a range of information that may be relevant to a career.				
(N=240) %	36.7	45.8	15.4	2.0
M=3.2				
Item 5: Developing an understanding of art, music, and drama.				
(N=241) %	10.0	17.4	44.0	28.6
M=2.1				
Item 6: Broadening your acquaintance and enjoyment of literature.				
(N=240) %	5.4	19.6	45.8	29.1
M=2.0				
Item 7: Writing clearly and effectively.				
(N=241) %	16.1	41.5	36.1	6.2
M=2.7				
Item 8: Acquiring familiarity with the use of computers.				
(N=240) %	19.2	22.1	35.4	23.3
M=2.4				

(Table Continued)

Responses	Very much	Quite a bit	Some	Very little
Item 9: Becoming aware of different philosophies, cultures, and ways of life.				
(N=239) %	11.7	32.2	46.0	10.0
M=2.5				
Item 10: Developing your own values and ethical standards.				
(N=240) %	25.8	47.1	20.8	6.2
M=2.9				
Item 11: Understanding yourself—your abilities, interests, and personalities.				
(N=241) %	34.0	47.7	15.8	2.5
M=3.1				
Item 12: Understanding other people and the ability to get along with different kinds of people.				
(N=241) %	29.9	53.1	16.1	0.8
M=3.1				
Item 13: Ability to function as a team member.				
(N=241) %	28.6	47.7	20.3	3.3
M=3.0				
Item 14: Developing good health habits and physical fitness.				
(N=239) %	14.2	33.1	42.3	10.5
M=2.5				
Item 15: Understanding the nature of science and experimentation.				
(N=241) %	22.8	34.4	33.2	9.5
M=2.7				
Item 16: Understanding new scientific and technical development.				
(N=241) %	16.6	41.0	28.2	14.1
M=2.6				
Item 17: Becoming aware of the consequences (benefits/hazards/dangers/values) of new applications in science and technology.				
(N=239) %	16.8	38.1	33.5	11.7
M=2.6				
Item 18: Ability to think analytically and logically.				
(N=240) %	30.8	47.1	20.4	1.7
M=3.1				
Item 19: Quantitative thinking—understanding probabilities, proportions, etc.				
(N=236) %	19.9	39.4	34.7	5.9
M=2.7				
Item 20: Ability to put ideas together, to see relationships, similarities and differences between ideas.				
(N=240) %	31.7	52.9	14.2	1.2
M=3.1				
Item 21: Ability to learn on your own, pursue ideas, and find information for yourself.				
(N=240) %	43.3	45.8	9.2	1.7
M=3.3				

Table 8 reports the results of the first thirteen questions of the state-constructed portion of the SOS. Students were asked "how capable do you feel about your (items 1-13)?" The response values were as follows:

1=Very incapable
2=Incapable
3=Somewhat incapable
4=Neutral
5=Somewhat capable
6=Capable
7=Very capable

Table 8. Perceived Capability

Item	SDSU MEANS
1. knowledge & abil. in academic major?	5.7
2. knowledge & abil. in career field?	5.7
3. ability to define & solve problems?	6.0
4. abil. to express self in all types of writing?	5.7
5. abil. to express self in front of others?	5.6
6. know. and abil. to apprec. lit., music, art & drama?	5.0
7. abil. to use full resources in lib.?	5.6
8. abil. to use computer in fut. career & life?	4.5
9. abil. to devel. self mentally & maintain high level of ment. health?	6.1
10. abil. to devel. self physically & maintain over lifetime?	6.0
11. know self—strengths, limitations, philosophy, future directions, etc.?	6.0
12. abil. to help others solve their problems?	5.6
13. abil. to perform all roles required as you work with others?	6.0

Although there are no national means available for comparison, these SDSU seniors appear to feel quite capable in the above areas. However the data in Table 6 and Table 7 together suggest that these seniors seemed less

confident about their appreciation of the arts and computer useage. Furthermore, there were differences between how males and females perceived their ability to use a computer. The male mean of 5.11 differs significantly from the female mean of 3.70.

COLLEGE EXPERIENCES

What did these students do while at SDSU? In one form or another that question surfaced many times as members of different campus groups were interviewed. Three survey instruments provide information directly relevant to that question (though all of them emphasize experiences during the senior year only). The first two are locally-constructed questionnaires that were inserted randomly in the SOS mailing, hence only a limited number of seniors responded to them. The third is the CSEQ which contains about 150 items aimed at answering, in detail, that question. This breadth, plus the fact that it was completed by 241 seniors, provides a rich data source for understanding their senior experiences at SDSU.

The first instrument, "Campus Involvemnt," contains 20 statements such as "I saw an art exhibit" or "I was an active member of a campus social organization." Students were instructed to "Check each activity you have engaged in during the past year on this campus." The abbreviated statements are rank-ordered in Table 9. The numbers to the right represent the percentage of students who marked that statement (N=79).

Table 8. Campus Involvement

	Items	Percentage
1.	Read campus newspaper regularly	95
2.	Attended athletic event	90
3.	Listened to speaker (out of class)	71
4.	Attended a play	62
5.	Active in prof./maj. organization	58
6.	Voted in campus election	58
7.	Participated in intramural sport	51
8.	Saw an art exhibit	48
9.	Attended a concert	38
10.	Helped make posters, exhibits, etc.	35
11.	Attended prog. by SA office	32
12.	Active member of camp. soc. organiz.	28
13.	Active member of camp. service org.	24
14.	Served on student or college comm.	14
15.	Participated in student govern.	13
16.	Saw a foreign movie	6
17.	Contacted admin. about campus issue	5
18.	Distrib. lit. on campus issue	5
19.	Circulated pet. on campus issue	5
20.	Campaigned for issues/people in cam. elec.	5

The second survey, "Notable Experiences," provides a different perspective on the matter of college experiences. Instead of simply indicating what they had participated in, students were asked "What stands out in your mind so far about your college experiences?" Ten experiences were listed

and they were instructed to check as many as applied. Table 10 lists the experiences, rank-ordered, and the percentage of responses each experience received (N=40).

Table 10. Notable Experiences

Items	Percentages
1. Particular courses that opened new interests to me	85
2. Informal discussions with other students	83
3. Living away from home	65
4. Particular professors who encouraged me in my work	53
5. Particular professors who took a personal interest in me	50
6. Realizing what the demands of good scholarship really are	45
7. Experiences of leadership in some campus activity	40
8. Some lectures that were particularly stimulating	38
9. Involvement in some extra-curricular activity such as music, drama, etc.	35
10. Participation in sports	15

As mentioned earlier in this section, the third survey, the CSEQ, asks for detailed responses about what seniors did in the current year of college. Moreover it provides not only a quantitative view of what they did, but also a qualitative one. The approximately 150 statements which make up the major portion of this survey are all positive statements, that is, they detail activities which would seem to positive aspects of university life. (Granted that some may take issue with labeling all of these activities as "positive.") Thus when students are asked to indicate the extent to which they did each of these activities, they are not only giving an account of the frequency of their efforts, but also the quality of their efforts.

Because of the extent of this survey, most of this portion has been included in Table 11. Next to each statement is the mean of the responses given by SDSU seniors. The values are as follows:

4=Very often
3=Often
2=Occasionally
1=Never

Table 11. Frequency of Experiences

Items	SDSU Mean
Library Experiences	
1. Used the library as a quiet place to read or study materials you brought with you.	2.37
2. Used the card catalogue to find what materials there were on some topic.	2.33
3. Asked the librarian for help in finding material on some topic.	1.93
4. Read something in the reserve book room or reference section.	2.19
5. Used indexes (such as the Reader's Guide to Periodical Literature) to journal articles.	2.55
6. Developed a bibliography or set of references for use in a term paper or other report.	2.47
7. Found some interesting material to read just by browsing in the stacks.	2.00
8. Ran down leads, looked for further references that were cited in things you read.	1.91
9. Used specialized bibliographies (such as Chemical Abstracts, Psychological Abstracts, etc.).	1.83
10. Gone back to read a basic reference or document that other authors had often referred to.	1.56
Course Learning	
1. Took detailed notes in class.	3.52
2. Listened attentively in class meetings.	3.46
3. Underlined major points in the readings.	3.07
4. Tried to see how different facts and ideas fit together.	3.23
5. Thought about practical applications of the material.	3.24
6. Worked on a paper or project where you had to integrate ideas from various sources.	2.98

(Table Continued)

Items	SDSU Mean
7. Summarized major points and information in your readings or notes.	2.82
8. Tried to explain the material to another student or friend.	2.81
9. Made outlines from class notes or readings.	2.11
10. Did additional readings on topics that were introduced and discussed in class.	1.97
Experiences with Faculty	
1. Talked with a faculty member.	3.31
2. Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.)	2.91
3. Visited informally and briefly with an instructor after class.	2.76
4. Made an appointment to meet with a faculty member in his/her office.	2.44
5. Discussed ideas for a term paper or other class project with a faculty member.	2.30
6. Discussed your career plans and ambitions with a faculty member.	2.34
7. Asked your instructor for comments and criticisms about your work.	2.06
8. Had coffee, cokes, or snacks with a faculty member.	1.65
9. Worked with a faculty member on a research project.	1.40
10. Discussed personal problems or concerns with a faculty member.	1.58
Student Union	
1. Had meals, snacks, etc. at the student union or student center.	2.59
2. Looked at the bulletin board for notices about campus events.	2.56
3. Met your friends at the student union or student center.	2.52
4. Sat around in the union or center talking with other students about your classes and other college activities.	2.44

(Table Continued)

Items	SDSU Mean
5. Used the lounge(s) to relax or study by yourself.	1.86
6. Seen a film or other event at the student union or center.	1.70
7. Attended a social event in the student union or center.	1.80
8. Heard a speaker at the student union or center.	1.83
9. Played games that were available in the student union or center (ping-pong, cards, pool, pinball, etc.).	1.43
10. Used the lounge(s) or meeting rooms to meet with a group of students for a discussion.	1.84
Art, Music, Theater	
1. Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college.	1.65
2. Gone to an art gallery or art exhibit on the campus.	1.73
3. Read or discussed the opinions of art critics.	1.29
4. Participated in some art activity (painting, pottery, weaving, drawing, etc.).	1.36
5. Talked about music (classical, popular, musicians, etc.) with other students at the college.	2.18
6. Attended a concert or other music event at the college.	1.91
7. Read or discussed the opinions of music critics.	1.48
8. Participated in some music activity (orchestra, chorus, etc.).	1.33
9. Talked about the theater (plays, musicals, dance, etc.) with other students at the college.	1.90
10. Seen a play, ballet, or other theater performance at the college.	2.08
11. Read or discussed the opinions of drama critics.	1.35
12. Participated in or worked on some theatrical production (acted, danced, worked on scenery, etc.).	1.18

(Table Continued)

Items	SDSU Mean
Clubs and Organizations	
1. Looked in the student newspaper for notices about campus events and student organizations.	2.58
2. Attended a program or event put on by a student group.	2.31
3. Read or asked about a club, organization, or student government activity.	2.14
4. Attended a meeting of a club, organization or student government group.	2.45
5. Voted in a student election.	2.37
6. Discussed policies and issues related to campus activities and student government.	2.02
7. Worked in some student organization or special project (publications, student government, social event, etc.).	2.00
8. Discussed reasons for the success or lack of success of student club meetings, activities, or events.	2.02
9. Worked on a committee.	2.00
10. Met with a faculty adviser or administrator to discuss the activities of a student organization.	1.84
Athletic and Recreation Facilities	
1. Set goals for your performance in some skill.	2.19
2. Followed a regular schedule of exercise, or practice in some sport, on campus.	1.98
3. Used outdoor recreational spaces for casual and informal individual athletic activities.	1.77
4. Used outdoor recreational spaces for casual and informal group sports.	1.72
5. Used facilities in the gym for individual activities (exercise, swimming, etc.).	2.14
6. Used facilities in the gym for playing sports that require more than one person.	1.91
7. Sought instruction to improve your performance in some athletic activity.	1.51
8. Played on an intramural team.	1.93
9. Kept a chart or record of your progress in some skill or athletic activity.	1.27

(Table Continued)

Items	SDSU Mean
10. Played in any varsity sport or athletic event.	1.21
Personal Experiences	
1. Told a friend why you reacted to another person the way you did.	2.82
2. Discussed with other students why some groups get along smoothly, and other groups don't.	2.41
3. Sought out a friend to help you with a personal problem.	2.54
4. Elected a course that dealt with understanding personal and social behavior.	2.10
5. Identified with a character in a book or movie and wondered what you might have done under similar circumstances.	2.34
6. Read articles or books about personal adjustment and personality development.	2.04
7. Taken a test to measure your abilities, interests, or attitudes.	1.92
8. Asked a friend to tell you what he/she really thought about you.	1.90
9. Been in a group where each person, including yourself, talked about his/her personal problems.	1.64
10. Talked with a counselor or other specialist about problems of a personal nature.	1.27
Experience in Writing	
1. Used a dictionary or thesaurus to look up the proper meaning of words	2.95
2. Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing.	3.14
3. Wrote a rough draft of a paper or essay and then revised it yourself before handing it in.	3.20
4. Spent at least five hours or more writing a paper (not counting time spent in reading or at the library).	2.78

(Table Continued)

Items	SDSU Mean
5. Asked other people to read something you wrote to see if it was clear to them.	2.61
6. Referred to a book or manual about style of writing, grammar, etc.	2.48
7. Revised a paper or composition two or more times before you were satisfied with it.	2.33
8. Asked an instructor for advice and help to improve your writing.	1.96
9. Made an appointment to talk with an instructor who had criticized a paper you had written.	1.64
10. Submitted for publication an article, story, or other composition you had written.	1.23
Science/Technology	
1. Memorized formulas, definitions, technical terms.	2.98
2. Tried to express a set (relationships in mathematical terms.	2.44
3. Tested your understanding of some scientific principle by seeing if you could explain it to another student.	2.35
4. Read articles (not assigned) about scientific theories or concepts.	1.97
5. Practiced to improve your skill in using some laboratory equipment.	1.95
6. Showed a classmate how to use a piece of scientific equipment.	1.95
7. Attempted to explain an experimental procedure to a classmate.	1.97
8. Went to an exhibit or demonstration of some new scientific device.	1.54
9. Worked on a paper or project where you used a computer.	2.44
10. Used a computer to assist in course learning (language skills, math skills, etc.).	1.87
11. Wrote a program to analyze data on a computer.	1.77
12. Sought out-of-class instruction in ways to use computers.	1.90

(Table Continued)

Items	SDSU Mean
Student Acquaintances	
1. Made friends with students whose academic major field was very different from yours.	2.90
2. Made friends with students whose interests were very different from yours.	2.57
3. Made friends with students whose family background (economic and social) was very different from yours.	2.63
4. Made friends with students whose age was very different from yours.	2.64
5. Made friends with students whose race was different from yours.	2.15
6. Made friends with students from another country.	1.98
7. Had serious discussions with students whose philosophy of life or personal values were very different from yours.	2.17
8. Had serious discussions with students whose religious beliefs were very different from yours.	2.12
9. Had serious discussions with students whose political opinions were very different from yours.	2.09
10. Had serious discussions with students from a country different from yours.	1.73

CURRICULUM AND ISSUES

This section includes discussion and data relevant to (1) current concerns about the core requirements at SDSU and (2) the sources of student stress. This is by no means an exhaustive treatment of these subjects. It is intended instead that the information presented will be of some value for people dealing with the subjects and--in the long run--initiate other questions which might be answered further analysis of current data available through the Assessment and Testing Office.

Throughout this Profile are data which would seem relevant to those concerned with the core curriculum. For example, item 5 in Table 7 gives the seniors' estimate of how much they think they have gained in their understanding of art, music, and drama. Other items focus on their estimates of their writing abilities, analytical thinking, self-knowledge and so on. These items and many others like them throughout this Profile provide a different perspective on the efficacy of current core requirements, a perspective that may not be found in other assessment instruments.

In addition to what's already in this Profile, Table 12 has been added. It was constructed from the first five questions in a section of the CSEQ titled "The College Environment." These questions ask the students to rate, on a 7-point scale, different characteristics which they think SDSU emphasizes. Table 12 summarizes the means of their ratings with a rating of 7 representing a strong emphasis at SDSU, and 1 representing a weak emphasis.

Table 12. Emphases at SDSU

Characteristic of coll. environment	Mean
1. Emphasis on the development of academic, scholarly, and intellectul qualities	5.5
2. Emphasis on the development of esthetic, expressive, and creative qualities	4.3
3. Emphasis on being critical, evaluative, and analytical	5.0
4. Emphasis on the development of vocational and occupational competence	4.9
5. Emphasis on the personal relevance and practical value of your courses	4.8

It can be observed that these seniors considered SDSU's emphasis on esthetic, expressive, and creative qualities to be less than other emphases. This difference further corroborates a pattern this author has observed throughout these surveys--a feeling among the seniors that they are not as well-prepared in the arts as they are in other areas. This difference may be interpreted as inevitable in an institution such as SDSU, therefore inconsequential; or it may be relevant to current discussions about core requirements, especially those requirements in Area 1 (Humanities) and what they are intended to accomplish.

The matter of student stress has also been a concern on this campus and indeed on campuses across the nation. When locally-constructed questions were added to the SOS, three of them specifically addressed this issue. Tables 13, 14, and 15 summarize the results of each. For each table the N=232. In each the responses are rank-ordered by percentage of students who chose that item. Also, to make the data more comprehensible, the initiating question is included after each table caption.

Table 13. External Cause of Stress (All people experience stress to some degree. Which of the following is the greatest cause of external stress for you?)

Cause	Percentage
1. Having too much to do	28.9
2. financial/money problems	19.0
3. academic pressure	18.5
4. deadlines/time pressure	10.3
5. interpersonal relationships	9.5
6. living up to one's expectations	5.6
7. other	3.4
8. work	2.6
9. difficulty with the law	0.0

Table 14. Internal Cause of Stress (Which of the following is the greatest internal cause of stress for you?)

Cause	Percentage
1. perfectionism/fear of failure	34.1
2. frustration/conflict/anger	14.7
3. feelings associated with self worth	11.2
4. inappropriate sleep habits	6.5
5. inability to say no	6.5
6. inability to assert yourself	6.0
7. inappropriate eating habits	5.2
8. lack of skill or ability	3.9
9. loneliness	3.4

(Table Continued)

Cause	Percentage
10. unrealistic expectations of others	2.6
11. other	2.6

Table 15. Involvement of Others (When you experience stress, who is most often involved?)

	Person(s)	Percentage
1.	Spouse/significant other	28.4
2.	friend/classmate	18.5
3.	roommate	12.9
4.	instructor	12.5
5.	parent	9.9
6.	group or organization	5.2
7.	other	4.3
8.	other relative	1.3
9.	your child/children	0.9
10.	employer	0.9
11.	fellow workers	0.9

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 1
Surveys
Part D: Survey Conclusions

December, 1987

Kris Smith

Randy Hyman
Doug Malo
Mary Schmiesing
Gary Steinley
Ron Stover

SURVEY CONCLUSIONS

After analyizing the data from the Student Opinion Survey (SOS), the Cooperative Institutional Research Program (CIRP), and the College Student Experiences Questionnaire (CSEQ), the Assessment Program Team would like to make some observation and recommendations regarding the use of surveys as part of the SDSU Assessment Program.

First, the SOS deals primarily with student affairs programs. While this information is valuable for assessing the students' satisfaction with a variety of programs and services and affords us the opportunity to compare the level of SDSU student satisfaction with other students nationally, it has limited usefulness for academic program review or evaluation of the core curriculum. In addition, much of this data can be obtained through more cost effective means (see recommendations below).

The large amounts of demographic data which are available from the CIRP are very useful in attempting to identify correlations and cause and effect relationships with other assessment instrument results and course grades. While much of this information is available through the ACT Assessment-Student Profile (Smith, 1987) the CIRP is much more timely. Many students take their ACT Assessment for college admission during their junior year or early in their senior year of high school. This causes concern regarding data reliability. In addition, the national norming data which are available with the CIRP are beneficial in asserting the degree to which SDSU students resemble the student population in similar institutions nationally.

When evaluating the advisability of continued use of the CIRP, the Assessment Program Team has to also consider the fairly high cost of the instrument. The possibility of having the demographic data from this survey available for every student at SDSU is exciting. It would enable the institution to do reseach here-to-for not possible. But alternative ways of obtaining the information may be more attractive and cost effective.

The CSEQ is a valuable instrument to determine how students spend their time both academically and personally. Of the three, this survey provides the most in-depth information regarding the types of activities students were involved in as well as how frequently they participated. In constrast to the SOS, the CSEQ deals in much more specific terms with both academic activities in and out of the classroom and student affairs programs. The information available through this survey can be useful to determine if correlations exist among course grades, performance on other assessment instruments and student experiences.

While each survey mentioned has some value for the SDSU Assessment Program, the Assessment Program Team suggests the development of a series of survey instruments which are specific to SDSU and which combine the attractive features of the instruments above. These surveys would collect the same student data from a variety of populations, allowing for

comparisons among student groups. In addition, these surveys would have the capability to address specific information unique to each group.

With this approach, SDSU could be assured of consistancy among instruments and obtain information of specific interest to State. These surveys would be developed for incoming freshmen, continuing students, non-returning students, graduating seniors, and alumni.

The Assessment Program Team recommends that these instruments be rotated to provide a variety of data on an on-going basis while keeping down costs. The only group that would be surveyed annually would be the entering freshmen. This would provide the same baseline information on all students and would allow the institution to do more in-depth research on student data and how it relates to educational outcomes.

Finally, it is suggested that periodically (i.e. every four years) the CIRP be administered to incoming freshmen. This would allow us to take advantage of the norming data without having to endure the cost of the instrument annually.

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 2
Assessing General Education Requirements (Core)

December, 1987

Doug Malo and Randy Hyman

Mary Schmiesing
Kris Smith
Gary Steinley
Ron Stover

EXECUTIVE SUMMARY

Numerous articles, reports, and studies have identified serious problems with the quality of undergraduate education in the United States. The South Dakota Board of Regents responded to this concern, in the fall of 1984, by instituting a comprehensive state-wide assessment program. The program was designed to provide institutions, departments, and students with information necessary to adequately identify strengths and weaknesses in the general education curriculum as well as specific academic programs. A state-wide assessment committee, in 1986-87, modified the original Regents program and developed a plan, subsequently adopted by the Regents, which placed the responsibility for assessment of the core and the major with the individual institutions.

A variety of standardized instruments have been used with particular student populations to assess general knowledge, skills, attitudes and behaviors of the SDSU student body since 1984. While a great deal of data has been collected over the course of the three years, no concerted effort has been made to review this data to determine the utility of the data for deciding whether the core learning objectives have been addressed by the University's core curriculum.

The Blue Ribbon Panel on the Core Curriculum has revised the core based on recommendations from various reform reports and has established, as a foundation for its efforts, a group of eleven coherencies, believed to represent the knowledge base considered critical to the undergraduate educational experience of all students.

Part A of this report documents the analysis conducted on each of the standardized instruments used in the Assessment Program since 1984. This analysis includes a description of each instrument, what each instrument is designed to measure, the student populations assessed and the frequency of assessment by instrument. An item analysis was conducted for each instrument by the eleven coherencies identified by the Blue Ribbon Panel.

No one instrument provides complete coverage of all core curriculum coherencies, Certain coherencies are better addressed by items in attitude surveys (e.g. ACT's Student Opinion Survey) while other coherencies could be measured best by instruments such as the ACT-COMP.

Part B provides an in-depth analysis of the ACT Assessment data collected since 1984. Incoming freshmen and sophomore ACT Assessment data were collected during 1984 thru 1986. The data were sorted longitudinally by residency, gender and college. Data analyses utilized appropriate statistical procedures so meaningful comparisons could be made. Comparisons were made on the composite scores as well as with the four subscores (English, Mathematics, Natural Science and Social Science). Significant differences were observed among and within groups analyzed.

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 2
Assessing General Education Requirements (Core)
Part A: Core Curriculum Assessment Methodology

December, 1987

Doug Malo and Randy Hyman

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Kris Smith Ron Stover

INTRODUCTION

Assessment programs are useful for stimulating academic excellence. The focus of education should be on learning rather than teaching (Reger and Hyman, 1985). This implies a change away from rote memorization of facts to analysis, synthesis, inquiry, reasoning and problem solving. Assessment's primary focus is and must remain to provide information to improve curricula, instruction, and academic advising. Assessment can help meet these needs by assisting:

1) in the development and monitoring of the University General Education Curriculum or Core (This information could be used by the Blue Ribbon Panel and the Academic Senate.).
2) departments and colleges in improving (updating and revising) course content and identify strengths and weaknesses.
3) departments and colleges in monitoring student growth and development in the Core areas.
4) departments in course selection for majors and when courses are taken.
5) advisors as they advise students on Core course selections and in University activities.
6) in accreditation review of programs by professional organizations (ie. engineering, education, pharmacy).

In Criterion Three of the North Central Accreditation (NCA) Evaluative Criteria (North Central Association of Colleges and Schools, 1987; 1986) the institution is asked if it is accomplishing its purposes. The institution must provide documentation to show that it is accomplishing its purposes using an assessment program. No one methodology is suggested by the NCA. It is up to the institution to design its own assessment program to meet its needs.

Assessment can provide necessary documentation to the Board of Regents (BOR), legislature, governor's staff, university staff, and the public that the institution is living up to its promises it makes when granting a degree (maintain public confidence). Assessment can help us answer the questions: "Is higher education worth the cost?" and "Are our students learning and obtaining the life-long skills/qualities being taught/practiced at the institution?"

In the "Assessment in South Dakota Higher Education" report (South Dakota Board of Regents Assessment Committee, 1987) to the BOR the need for assessment of skills and qualities related to the Core area (general education curriculum) is clearly defined as: 1) the identification of institutional Core goals based on the mission statements, philosophy, and purposes of the University; 2) the development of Core curriculum objectives which are statements of behavior that demonstrate the content knowledge, skills, process knowledge, attitudes and behaviors expected at the completion of a Core program or course; 3) the development of an assessment program (documentation and validation) to demonstrate how well the Core program (course) is meeting its purposes and goals;

4) making certain the stated purposes and goals are critical to the success of the graduates from the University; and 5) adjusting, changing, and updating Core curricula (courses) and outcomes (goals) in response to assessment outcomes, a formative process.

AREAS TO ASSESS IN THE GENERAL EDUCATION AREAS (CORE).

The knowledge, skills, attitudes, and behaviors obtained through general education include (but are not limited to) the following:

1) the ability to communicate and understand (speaking clearly, effective writing, careful listening, and critical reading).
2) the ability to think critically (i.e. the impact of social institutions on individuals, societies, and their cultures; identify and understand the impact of science and technology on individuals, societies, and cultures; understand art forms and their impact on culture and humanity).
3) the ability to analyze and synthesize information (know what information is needed, know where to find the needed information, know when it is needed, and know how to use the information gathered).
4) the ability to solve problems (including basic computations and the ability to transfer, integrate, and process knowledge from one situation to another).
5) the development/change in attitudes and beliefs that lead to professionalism (personal and professional ethics; life-long learning; ideals of honesty, justice, equity, generosity, respect, and service) and the skills necessary to function in society with all cultures (students with a global perspective, they accept differences).

OBJECTIVES

The objectives of this part of the report were to:

1) review nationally normed tests and opinion surveys to determine appropriateness of use in assessing "Core curriculum areas (coherencies)" as identified by the Blue Ribbon Panel (1987).
2) review standardized tests and assessment procedures curently or recently used at South Dakota State University.
3) determine what types of baseline data need to be collected to allow for meaningful analysis of survey and test data.
4) make recommendations and identify a strategy (roadmap) of instrument evaluation to help the University meet the assessment needs in the Core areas.

METHODOLOGY TO ACCOMPLISH THE NEEDS IDENTIFIED

Selection of Assessment Methodology

Colleges and departments need to identify what they want to assess. The use of nationally normed tests and opinion surveys may or may not be appropriate for certain Core areas. The selection of an assessment methodology should reflect the following concerns:

1) does it reflect the Core areas?
2) have faculty been involved in the development, implementation, and analysis of the program?
3) does the assessment program measure the important Core goals and purposes identified by the University?
4) does the assessment cover higher levels thinking skills, not just fact memorization?
5) is the assessment procedure reliable and validated (outside norms and/or review required)?
6) the assessment program is not limited to only an exit exam or opinion survey.

Standardized Tests/Assessment Procedures Currently/Recently Used at South Dakota State University

The ACT-COMP Objective Test was given to incoming freshmen class in the F1985 (n=521)and F1986 (n=590), and second semester sophomores S1986(matched with earlier freshmen scores, n=380). The ACT-Comp will be given to graduating seniors in FY1988 (matched with earlier freshmen scores). Approximately 1/2 of the freshmen were retested as sophomores and 1/2 will be retested as graduating seniors.

The areas covered in the ACT-Comp that are related to Core includes: communication (no indivdual speaking or writing is assessed), problem solving, clarifying values, functioning within social institutions, using science and technology, and using the arts.

The ACT Assessment Program is required of all incoming freshmen (usually taken during junior/senior year of high school). ACT Assessment data has been collected on incoming freshmen for at least the last 15 years (avg n=1200). It was also given to second semester sophomores in S1986 (n=515).

Areas covered in the ACT Assessment Test that are related to the Core include: English, mathematics, social sciences, and natural sciences (considering basic knowledge, problem solving, and reasoning in each area).

The Student Profile Section (SPS) of the ACT Assessment Program can provide information on high school accomplishments and other areas related to the Core.

The Cooperative Institutional Research Program (CIRP) was given to freshmen in F1986 (n=746). It measures the attitudes, experiences, and skills of incoming freshmen. The CIRP includes considerable self-assessment questions, social views, expectations, and importance of college education to the student.

The College Student Experiences (CSE) was given to graduating seniors in the spring of 1987 (n=241). The CSE is given alternate years with the Student Opinion Survey (SOS).

The areas covered in the CSE related to Core areas include: library use/experience, course learning, fine art (art, music, theater) use and appreciation, campus involvement, writing experiences, working with staff and peers, science and technology use and appreciation, college environment, and self-assessment.

The Student Opinion Survey (SOS) was given to all classes in 1984 (n=600) and graduating seniors in the spring of 1986 (n=232). In addition, local questions were added to the form to provide information needed for local use.

The Watson-Glaser Critical Thinking Appraisal was given to 50 graduating seniors (S1987) in Nursing. It is a test designed to measure critical thinking and considers inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments.

The ACT-COMP-ARC (Assessment of Reasoning and Communicating) is the more intensive version of the ACT Composite Exam. In addition to the ACT-COMP, six additional activities (three oral + three written) are required. This exam evaluates individual students on reasoning, writing, and speaking abilities in addition to the normal ACT-COMP analysis. This exam was given to 36 graduating seniors in jounalism and speech. Local staff were involved in the evaluation of the oral and written presentations.

There are many other types of assessment instruments used at South Dakota State University including but not limited to:

1) specific course assessment/evaluation.
2) the Graduate Record Exam-General(GRE) is required by various departments for entry into graduate school. The information available is primarily general scores with some useful information in selected Core areas (i.e. vocabulary, sciences and mathematics areas). The GRE is generally given to graduating seniors. Scores have been gathered since Spring 1980.

3) the National Teachers Exam (NTE) is given to graduating seniors in teaching areas. The area of the exam of most interest for the Core area is the communication score.

4) the Engineering in Training Exam (EIT) is given to engineering students each year. The possibility of useful information for engineering areas is limited by the information available from the EIT.

Methodology for Instrument Evaluation and Selection

All assessment instruments used at SDSU were examined for possible use in evaluating Core curriculum areas. The areas to assess in the General Education Core were based on the 11 coherencies identified and approved by the SDSU Blue Ribbon Panel (BRP) on Core curriculum (Blue Ribbon Panel, 1987). Each instrument was reviewed to determine what questions (items) in each instrument were related to the 11 Core coherencies identified by the BRP (see Appendix A for copy of 11 coherencies adopted by the BRP). Only instruments with high numbers of observations and with no bias to major were included in this study.

Six instruments were selected to be used in this initial study on Core areas. They were the SOS, ACT Assessment and SPS, ACT-COMP, CSE, CIRP, and the GRE General (copies of each instrument are available for review at the SDSU Assessment and Testing Office). Each question or item on each instrument was carefully read by two independent faculty members who determined which coherency(ies), if any, a question addressed. In Appendix B each coherency and the related question(s) from each instrument are listed.

The demographic data needed for each student is listed below and the source of this information is shown in parentheses. The demographic data needed includes:

1) Name (SDSU tape)
2) Social security number and SDSU ID number (SDSU, SOS, ACT, CIRP, CSE tapes)
3) Age (SOS, CIRP, CSE, SDSU tapes)
4) Racial/Ethnic group (SOS, ACT, CSE, CIRP, SDSU tapes)
5) Sex (SDSU, SOS, ACT, CSE, CIRP tapes)
6) Marital status (SDSU, SOS, ACT, CSE, CIRP tapes)
7) College enrolled in (SDSU, SOS tapes)
8) Full-time vs part-time (SDSU, ACT, SOS, CSE, CIRP tapes)
9) Residency (SOS,SDSU,CSE,CIRP tapes)
10) Hours of work/week (CSE, SOS tapes)
11) Hours of study/week (CSE, SOS tapes)
12) ACT scores (composite and areas (SDSU, ACT tapes)
13) High School Rank (SDSU, ACT, CIRP, SPS tapes)

14) Parents income level (CIRP tape)
15) Parental education (CIRP, SOS, CSE tapes)
16) High school grades/subjects studied (# years studied) (SDSU, ACT, SOS tapes)
17) Veteran or not (SDSU tape)
18) Transfer students (CSE, CIRP tapes)
19) Housing (residence hall,home,greek from SDSU, CSE tapes)
20) SDSU grades TCA,GPE,GPA (previous,current and updated semester totals from SDSU tape)
21) High School Size (ACT Tape, SDSU tapes)

In addition to the basic demographic information identified above, additional questions from assessment instruments were selected. These questions included:

1) SOS - Section 1 - Purpose for school (E) also in CIRP
   - Section 2 - # 1,2,6,7
   - Section 3 - # 42,35 22-29,1,4,7,9
   - Additional Questions - #19,30
   - Educational Priorities - #1
   - SOS 84 Additional Questions - 1,2,6,and 24
2) CSE/CIRP - Academic plans
   - Miles from home
   - Question # 40 items c,d,k,l,m, and w from CIRP

Analysis Plan

1. Prepare baseline information for incoming students.
2. Compare ACT COMP freshmen with sophomores and seniors (longitudinally and simple) using 1985,1986, and 1987 data. Compare incoming freshmen classes (1985 with 1986).
3. Compare ACT Assessment pre-freshmen with sophomores. Compare incoming freshmen classes (1980-1985).
4. Compare CIRP and SPS with SOS and CSE.
5. Compare university norms for each instrument used (including GRE) with other state institutions, regional, and national norms.
6. Procedure - Use chi-square analysis (for discrete variables), simple correlation matrices, and various sorts by demographic data to categorize the results. Some frequency tables, bar charts, and figures may be necessary to illustrate the trends. Regression equations will be developed where appropriate (ie. ACT COMP and ACT Assessment scores). Mean, median, and mode should be determined for the variables examined.

FUTURE RECOMMENDATIONS TO MEET UNIVERSITY NEEDS

The recommendations for future work in Core assessment utilizing existing data and changes in Core curriculum/University academic requirements at South Dakota State University are:

1) evaluate each of the six assessment initially selected in this study for review using the procedure described above (in association with Appendix B).

2) continue periodic use of the ACT-COMP for freshmen and seniors as it is currently done until the instruments have been fully evaluated.

3) continue the use of ACT Assessment and SPS for incoming freshmen and periodic use of ACT Assessment for Seniors.

4) continue the periodic use of the CIRP for incoming freshman.

5) continue the periodic practice of alternating the SOS with the CSQ with graduating senior classes. Insert additional questions as needed to supplement each instrument.

6) develop a basic writing and speaking skills assessment program for each department so each student would be evaluated prior to graduation. This could be handled through the existing senior seminar courses, the development of a senior thesis/research project, or through the use of outside senior examiners, or any combination of the above.

7) evaluate the ACT-COMP-ARC, Watson-Glaser and other instruments (ETS academic profile, ACT Proficiency Exam) for possible adoption by the institution to help improve our assessment program and our instruction.

8) continue use of letter grades for evaluation in Core courses.

9) identify on the transcript those courses taken to meet the Core, along with calculating a GPA for Core courses.

10) change graduation (degree) requirements to include a graduation ratio requirement or GPA of 2.0 for Core courses.

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APPENDIX A

Purposes for South Dakota State University

(Adopted by the SDSU Blue Ribbon Panel on Core Curriculum, Fall 1987.)

In accepting the provisions of the "Morrill Act" of Congress (1862), the State of South Dakota pledged itself to carry out the purposes of the Land-Grant College Act: to endow, support, and maintain one university where a major emphasis is teaching "agricultural and mechanic arts," including "scientific and classical studies," in order to promote a liberal and practical education in the "several pursuits and professions in life."

Within the spirit of the "Morrill Act" and the early legislative acts of South Dakota, the purposes of SDSU are to develop, maintain, and encourage:

1. Learning in the fields of agriculture; engineering; home economics; liberal arts; pharmacy; nursing; teacher education; basic physical, biological and social sciences; humanities and fine arts at both the undergraduate and graduate levels.

2. Research in agriculture; engineering; home economics; liberal arts; pharmacy; nursing; teacher education; basic physical, biological and social sciences; humanities and fine arts at both the undergraduate and graduate levels.

3. Extension/outreach programs in agriculture; engineering; home economics; liberal arts; pharmacy; nursing; teacher education; basic physical, biological and social sciences; humanities and fine arts for adults and youth in South Dakota.

4. Citizenship training and general learning essential for understanding and appreciating the American way of life and its relationship to the world community.

5. Student self-development in leadership, social, intellectual, recreational, interpersonal, ethical, and spiritual attributes.

6. Student self-development in international and intercultural understanding consistent with the continually increasing cultural, economic and political interdependence of the modern world.

7. Vocational learning and training in seleceted areas.

8. Collection, preservation, display and study of artistic, artifactual and documentary materials which are the cultural base for all future programs.

9. Service for the welfare of South Dakota, the region and the nation.

Qualities of an Educated Person

(Adopted by the SDSU Blue Ribbon Panel on Core Curriculum, Fall 1987.)

Ideally, upon graduation, SDSU students will have attained the abilities to think, read, speak and write effectively, both within their practiced disciplines and beyond. In confidently shaping the future, as individuals on their jobs and as people collectively charged with the responsibility of nurturing a humane, rational, and free republic, our graduates should demonstrate an abiding belief in the value of learning. They should possess both historic and aesthetic perspectives and act in accordance with high ethical and spiritual codes of behavior, even in the face of adversity. Above all, they should seek to foster understanding and harmony among their fellow citizens of this diverse nation and world.

Patterns of Coherence in Learning Experiences

The SDSU Blue Ribbon Panel on Core Curriculum adopted (Fall 1987) the philosophy encoded by the nine categories of learning experiences as outlined by the AACC (Association of American Colleges Committee) in its document "Integrity in the College Curriculum" (Chronicle of Higher Education - 2/11/85). These categories represent crucial patterns of coherence in the learning experiences of an educated person and include:

1. Critical thinking (including inquiry, abstract, logical thinking, critical analysis, problem solving)
2. Literacy (writing, reading, speaking, listening, information including library and computer)
3. Understanding numerical data
4. Historical consciousness and evaluation -- skeptical thinking and wider understanding beyond rote learning.
5. Science -- understanding the intellectual and philosophical context of scientific observation. research, and debate.
6. Understand moral philosophy and values (includes ethical and spiritual codes of behavior)
7. Aesthetic apprciation and experience of art
8. International and multicultural experience -- appreciate ethnic diversity in the U.S. and throughout the world (Promote understanding and harmony among citizens of the nation and world.)
9. Study in depth (value of learning) -- development of complex perspectives to connect discrete educational experiences with day to day events
10. Committment to wellness of oneself and others
11. Committment to service -- application of knowledge in actively giving service to student peer groups, the University, the community, the state, the nation and for humanity

NDIX B

Core Assessment Strategy

(Each coherency identified by the ERP [see Appendix A] is listed along with questions from major instruments already being used.)

Note not every coherency will be adequately assessed by the instruments (SOS, ACT COMP, CSE, CIRP, ACTA, SPS, GREG, SOS84AQ) being used, however those questions and/or areas from each question which apply are identified below.
(ACTA = ACT Assessment, SPS = Student Profile Section of ACTA, CSE = College Student Experiences, SOS = Student Opinion Survey, CIRP = Cooperative Institutional Research Program)
GREG = Graduate Record Exam - General
SOS84AQ = Additional questions in 84 SOS

(NOTE: LINES SEPARATE QUESTIONS/ITEMS FROM DIFFERENT INSTRUMENTS.)

COHERENCY 1. CRITICAL THINKING (includes inquiry,abstract and logical thinking, critical analysis, problem solving)

1.1 Honors program - Section(S) 2 #18, SOS
1.2 Credit by exam - S2 #17,SOS
1.3 Faculty attitude toward students - S3 #5, SOS
1.4 Variety courses offered - S3 #6,SOS
1.5 Flexibility in program - S3 #8,SOS
1.6 Campus media - S3 #41,SOS
1.7 Opportunity for campus involvement - S3 #38,SOS
1.8 Preparation for profession - S3 #11, SOS
1.9 Reasoning ability - S4 Educational Benefits(EB) #9, SOS
1.10 Idea relationships - S4 EB #10, SOS
1.11 Skepticism - S4 EB #12, SOS
1.12 Quantitative thinking- S4 EB #13,SOS
1.13 Facts, terminology - S4 EB # 7, SOS
1.14 Solve problems of society - S4 Educational Priorties(EP) #9, SOS
1.15 Seek knowledge - S4 EP #8,SOS
1.16 Critic of society - S4 EP #10,SOS
1.17 Help grades - S4 AQ #18,SOS
1.18 Know yourself - S4 AQ #11,SOS
1.19 Use computer technology - S4 AQ #8,SOS
1.20 Use library - S4 AQ #7,SOS
1.21 Ability to define/solve problems - S4 Additional Questions (AQ) #3, SOS
1.22 Questions 19,22, and 27 - SOS84AQ

1.23 Identify and define problems - Solving Problems(SP) G, ACT Comp
1.24 Approaches to solve problems - SP H, ACT Comp
1.25 Generate possible solutions, hypotheses, of testable propositions - SP I, ACT Comp
1.26 Collect needed data to solve problem - SP J, ACT Comp
1.27 Determine logical consistency among info obtained, problem as defined, and solutions proposed - SP K, ACT Comp
1.28 Determine solution to use - SP L, ACT Comp
1.29 Propose or select procedures to evaluate solution - SP M, ACT Comp
1.30 Evaluate the process by which problem was solved - SP N, ACT Comp
1.31 Can assess a set of values for consistency - Clarifying Values (CV) P, ACT Comp
1.32 Analyze rationales for value choices - CV R, ACT Comp
1.33 Can infer values from behavior - CV S, ACT Comp
1.34 Can analyze implications of decisions - CV T, ACT Comp
1.35 Questions 8,9, and 10 in Library Experiences(LE) of CSE
1.36 Questions 4,5,6,7,8,and 10 in Course Learning(CL) of CSE
1.37 Questions 2,3,9, and 10 in Experience in Writing(EW) of CSE
1.38 Questions 5,8,and 9 in Personal Experiences(PE) of CSE
1.39 Questions 3,4,7,and 8 in Science/Technology(ST) of CSE
1.40 Questions 2,5,and 6 in Information in Conversation(IC) of CSE
1.41 Question 2 in Reading/Writing(RW) of CSE
1.42 Questions 1,3,and 5 in The College Environment(CE) of CSE
1.43 Questions 18,19,20, and 21 in Estimate of Gains(EG) of CSE
1.44 Question o in #25 of CIRP
1.45 Questions a and j in #26 of CIRP
1.46 Question g in #27 of CIRP
1.47 Composite score ACTA
1.48 HS extracurricular activities (EA)/college plans in debate and department clubs - SPS
1.49 Special needs/interests (SNI) honors and independent study - SPS
1.50 GRE - analytic assessment

COHERENCY 2. LITERACY (written, reading, speaking, listening, information including computer/library)

2.1 Computer services - S2 #19, SOS
2.2 Library - S2 #6, SOS
2.3 Credit by exam - S2 #17,SOS
2.4 Faculty attitude toward students - S3 #5, SOS
2.5 Variety courses offered - S3 #6,SOS
2.6 Flexibility in program - S3 #8,SOS

2.7 Personal campus involvement - S3 #38,SOS
2.8 Campus media - S3 #41,SOS
2.9 Preparation for profession - S3 #11, SOS
2.10 Guest Speaker - S4 Campus Involvement (CI) #7, SOS
2.11 Campus newspaper - S4 CI #12, SOS
2.12 Drama - S4 CI #2,SOS
2.13 Distributed literature - S4 CI #17,SOS
2.14 Circulated petition - S4 CI #18,SOS
2.15 Work with campus admin on issue - S4 CI #16, SOS
2.16 Writing, speaking - S4 EB #4, SOS
2.17 Broadened literary appreciation - S4 EB #2,SOS
2.18 Skepticism - S4 EB #12,SOS
2.19 Vocabulary, terminology - S4 EB #7,SOS
2.20 Seek/disseminate new knowledge - S4 EP #8,SOS
2.21 Lectures stimulating - S4 Notable Experiences(NE) #9, SOS
2.22 Express self in writing - S4 AQ #4, SOS
2.23 Express self in speaking - S4 AQ #5, SOS
2.24 Improve grades - S4 AQ #18,SOS
2.25 Problem solving ability - S4 AQ #3,SOS
2.26 Information literacy, library use - S4 AQ #7, SOS
2.27 Computer usage ability - S4 AQ #8, SOS
2.28 Questions 3,4,5,19,21,25, and 26 - SOS84AQ
2.29 Receive info from presentations - Communicating (CO) A, ACT Comp
2.30 Send info via presentations - CO B, ACT Comp
2.31 Receive info from written materials - CO C, ACT Comp
2.32 Send info in written form - CO D, ACT Comp
2.33 Receive info from numeric/graphic media - CO E, ACT Comp
2.34 Send info using numeric/graphic media - CO F, ACT Comp
2.35 Can collect info needed to solve problem - SP J, ACT Comp
2.36 All library questions in LE of CSE (10 items)
2.37 Questions 1,2,3,5,6,and 7 in Experiences with Faculty (EF) of CSE
2.38 Questions 1,2,3,7, and 9 in CL of CSE
2.39 All questions in EW of CSE (10 items)
2.40 Questions 9,10,11, and 12 in ST of CSE
2.41 Questions 1 and 4 of DFS
2.42 Questions 1,3,4, and 6 in IC of CSE
2.43 All questions in RW of CSE (4 items)
2.44 Question 2 of CE of CSE
2.45 Questions 6,7 and 8 in EG of CSE
2.46 Questions a,d,and k in #25 of CIRP
2.47 Questions e and l in #26 of CIRP
2.48 Question c in #27 of CIRP
2.49 Questions a,c,and g in #36 of CIRP
2.50 Questions a,c, and e in #37 of CIRP
2.51 English, Social Studies, Natural Sciences, and Composite scores from ACTA
2.52 HS English and Speech grades from SPS
2.53 HS speech and writing o[illegible]-of-class(oc) - SPS
2.54 HS EC /college plans in [illegible]ublications, debate, and radio-SPS

2.55 HS years studied subject (YS) of English - SPS
2.56 SNI writing, reading, and English - SPS
2.57 GRE verbal assessment

COHERENCY 3. UNDERSTANDING NUMERICAL DATA

3.1 Computer use satisfaction - S2 #19, SOS
3.2 Credit by exam - S2 #17,SOS
3.3 Preparation for profession - S3 #11, SOS
3.4 Facts in field - S4 EB #7,SOS
3.5 Improve grades - S4 AQ #18,SOS
3.6 Problem solving ability - S4 AQ #3,SOS
3.7 Quantitative thinking - S4 EB #13, SOS
3.8 Question 5 - SOS84AQ
3.9 Receive info from numeric/graphic media - CO E, ACT Comp
3.10 Send info using numeric/graphic media - CO F, ACT Comp
3.11 Questions 2,10, and 11 in ST of CSE
3.12 Questions a and g in #26 of CIRP
3.13 Questions e,f,o,w, and n in #33 of CIRP
3.14 Questions b and g in #36 of CIRP
3.15 Questions a,c, and e in #37 of CIRP
3.16 Questions h,m, and r in #39 of CIRP
3.17 Questions f and o in #40 of CIRP
3.18 Math score ACTA
3.19 HS Math grades and subjects taken - SPS
3.20 HS YS math/business courses - SPS
3.21 SNI mathematics - SPS
3.22 Interest Inventory (II) business contact and business operation - SPS
3.23 GRE Quantitative assessment

COHERENCY 4. HISTORICAL CONSCIOUSNESS AND EVALUATION

4.1 Cultural programs - S2 #15,SOS
4.2 Credit by exam - S2 #17,SOS
4.3 Faculty attitude toward students - S3 #5, SOS
4.4 Variety courses offered - S3 #6,SOS
4.5 Flexibility in program - S3 #8,SOS
4.6 Preparation for profession - S3 #11,SOS
4.7 Vocabulary,terminology - S4 EB #7,SOS
4.8 Broadened literacy appreciation - S4 EB #2, SOS
4.9 Transmit cultural values - S4 EB #3, SOS
4.10 Controversial speakers - S4 AQ #14,SOS
4.11 Knowledge in academic areas - S4 AQ #1,SOS
4.12 Knowledge in profession - S4 AQ #2,SOS
4.13 Questions 5,6,7,8,9 and 22 - SOS84AQ
4.14 Improved grades - S4 AQ #18,SOS

4.15 Assess set of internal values for consistency - CV P, ACT Comp
4.16 CV O,ACT COMP
4.17 CV Q,ACT COMP
4.18 Development/change in social institutions - Functioning in social institutions (FSI) #4, ACT Comp
4.19 Structures and functions which underlie social institutions - FSI #2, ACT Comp
4.20 Identify activities/institutions which constitute social parts of culture - FSI #1, ACT Comp
4.21 Impact of science on individual/culture - US #9, ACT Comp
4.22 Predict consequences of new technology - US #10, ACT Comp
4.23 Identify activities which constitute artistic/humanistic aspects of culture - Using the Arts (UA) #11, ACT Comp
4.24 Question 8 in TC of CSE
4.25 Question a in #26 of CIRP
4.26 All questions in #33 of CIRP (23 items)
4.27 Question f in #36 of CIRP
4.28 Social Studies score ACTA
4.29 HS History grades and subjects - SPS
4.30 HS EC/college plans in debate - SPS
4.31 HS YS social studies - SPS
4.32 GRE analytic assessment

COHERENCY 5. UNDERSTAND THE INTELLECTUAL AND PHILOSOPHICAL CONTEXT OF SCIENTIFIC OBSERVATION, RESEARCH, AND DEBATE

5.1 Credit by exam - S2 #17,SOS
5.2 Faculty attitude toward students - S3 #5, SOS
5.3 Variety courses offered - S3 #6,SOS
5.4 Flexibility in program - S3 #8,SOS
5.5 Preparation for profession - S3 #11, SOS
5.6 Science understanding - S4 EB #11, SOS
5.7 Vocabulary,terminology - S4 EB #7,SOS
5.8 Help grades - S4 AQ #18,SOS
5.9 Generate possible solutions, hypotheses, or testable propositions - SP I, ACT Comp
5.10 Evaluate process by which problem solved - SP N, ACT Comp
5.11 Questions G,H,J,K,L.and M in SP, ACT Comp
5.12 Can analyze rationales for choices - CV R, ACT Comp
5.13 Identify activities/products which make up technological aspects of culture - US #6, ACT Comp
5.14 Describe scientific concepts, laws, and/or principles - US #7, ACT Comp
5.15 Explain impact of technology on natural environment - US #8, ACT Comp
5.16 Explain impact of technology on individual and their culture - US #9, ACT Comp
5.17 Predict consequences of new technology - US #10, ACT Comp

5.18 All questions in ST of CSE (12 items)
5.19 Questions 10 and 11 in TC of CSE
5.20 Questions 15,16, and 17 of EG in CSE
5.21 Questions m and n in #25 of CIRP
5.22 Questions d,g, and i in #33 of CIRP
5.23 Questions d and e in #36 of CIRP
5.24 Questions j and n in #39 of CIRP
5.25 Natural Sciences score ACTA
5.26 HS Social Science grades and subjects - SPS
5.27 HS Natural scienc grades and subjects - SPS
5.28 HS science oc - SPS
5.29 HS YS social studies and natural sciences - SPS
5.30 SNI social studies and natural sciences - SPS
5.31 II science - SPS
5.32 GRE analytic assessment

COHERENCY 6. UNDERSTAND MORAL PHILOSOPHY AND VALUES (includes ethical and spiritual codes of behavior)

6.1 Faculty attitude toward students - S3 #5, SOS
6.2 Variety courses offered - S3 #6,SOS
6.3 Flexibility in program - S3 #8,SOS
6.4 Preparation for profession - S3 #11, SOS
6.5 College policies voice - S3 #16, SOS
6.6 Rules governing students - S3 #17, SOS
6.7 Academic probation - S3 #18, SOS
6.8 Religious activities - S3 #40, SOS
6.9 Distributed literature - S3 #17, SOS
6.10 Personal safety - S3 #21,SOS
6.11 Campus media - S3 #41,SOS
6.12 Campus involvement - S3 #38,SOS
6.13 Racial harmony - S3 #36,SOS
6.14 Concern for individual - S3 #34,SOS
6.15 Circulated petition - S3 #18, SOS
6.16 Appreciation of religion - S4 EB #19, SOS
6.17 Appreciation of individually - S4 EB #16, SOS
6.18 Social development - S4 EB #17, SOS
6.19 Tolerance and understanding - S4 EB #18, SOS
6.20 Friendship, loyalties development - S4 EB #15, SOS
6.21 Improved social, economic status - S4 EB #6, SOS
6.22 Cultural awareness - S4 EB #1,SOS
6.23 Personal development - S4 EB #14,SOS
6.24 Personal philosophy development - S4 EP #12, SOS
6.25 Provide leaders - S4 EP #2, SOS
6.26 Serve economic needs - S4 EP #4, SOS
6.27 Broaden students perspective - S4 EP #6, SOS
6.28 Serve as critic of society - S4 EP #10, SOS
6.29 Transmit cultural values - S4 EP #3,SOS
6.30 Speaker with different points of view - S4 AQ #14, SOS

6.31 Define/solve self problems - S4 AQ #3,SOS
6.32 Improve grades - S4 AQ #18,SOS
6.33 Help others - S4 AQ #12,SOS
6.34 Knowing yourself - S4 AQ #11,SOS
6.35 Appreciate fine arts - S4 AQ #6,SOS
6.36 People different backgrounds -S4 AQ #15,SOS
6.37 Alcohol expenses - S4 AQ #26,SOS
6.38 Alcohol and studies - S4 AQ #27,SOS
6.39 Chemical abuse programs - S4 AQ #28,SOS
6.40 Association with foreign students - S4 AQ #29,SOS
6.41 Faculty role models - S4 AQ #22,SOS
6.42 Work with others - S4 EP #13, SOS
6.43 Questions 2,5,7,8,9,11,12,13,14,15,16,21,22,23,27,and 28 - SOS84AQ

6.44 Identify values faced daily - CV O, ACT Comp
6.45 Assess values for consistency - CV P, ACT Comp
6.46 Influences on development of individual values - CV Q, ACT Comp
6.47 Analyze rationales for value choices - CV R, ACT Comp
6.48 Infer personal values from behavior - CV S, ACT Comp
6.49 Analyze implications of decisions made - CV T, ACT Comp
6.50 Predict how involvement with social institutions places one in conflict or compatible situation - FSI #5, ACT Comp
6.51 Relationships between social institutions and individual - FSI #3, ACT Comp
6.52 Identify activities/institutions which consitute social aspects of a culture - FSI #1, ACT Comp

6.53 Question 4 in EF of CSE
6.54 Questions 3,4,6,7, and 8 in Student Union(SU) of CSE
6.55 All questions in PE of CSE (10 items)
6.56 All questions in Student Acquaintances (SA) of CSE (10 items)
6.57 Questions 2,3,4,5,6, and 7 in DFS of CSE
6.58 Questions 6,8, and 12 of TC in CSE
6.59 Questions 1,2,and 3 in OC of CSE
6.60 Questions 5,6,7, and 8 in CE of CSE
6.61 Questions 10,12, and 13 in EG of CSE

6.62 Questions c,p,s,t,w,x, and q in #25 of CIRP
6.63 Questions c,f,i,j, and k in #26 of CIRP
6.64 All questions in #27 of CIRP (11 items)
6.65 Question #29 of CIRP
6.66 All questions in #33 of CIRP (23 items)
6.67 All questions except e,k,and l in #34 of CIRP (12 items)
6.68 Question #35 of CIRP
6.69 All questions in #37 of CIRP (12 items)
6.70 All questions in #39 of CIRP (18 items)
6.71 Questions e,i,j,h and s in #40 of CIRP

6.72 HS leadership and work experience oc - SPS
6.73 HS EC/college plans in student government, religious organizations, racial/ethnic groups, political organizations - SPS

COHERENCY 7. AESTHETIC APPRECIATION AND EXPERIENCE OF ART

7.1 Cultural programs - S2 #15, SOS
7.2 Credit by exam - S2 #17,SOS
7.3 Faculty attitude toward students - S3 #5, SOS
7.4 Variety courses offered - S3 #6,SOS
7.5 Flexibility in program - S3 #8,SOS
7.6 Preparation for profession - S3 #11, SOS
7.7 Concerts - S4 CI #1, SOS
7.8 Drama - S4 CI #2, SOS
7.9 Art exhibit - S4 CI #3, SOS
7.10 Foreign movie - S4 CI #4, SOS
7.11 Aesthetic sensitivity - S4 EB #3, SOS
7.12 Cultural awareness - S4 EB #1,SOS
7.13 Enrich life culturally - S4 EP #7, SOS
7.14 Broadened students perspective - S4 EP #6,SOS
7.15 Extra-curricular activity - S4 NE #4, SOS
7.16 Appreciate literature, music, art, drama - S4 AQ #6, SOS
7.17 Opportunities for literature, music, art, drama - S4 AQ #16, SOS
7.18 Question 2,6,and 29 - SOS84AQ
7.19 Identify art/humanistic activities/products which constitute culture - UA #11, ACT Comp
7.20 Describe elements that constitute art/humanist activities and products - UA #12, ACT Comp
7.21 Explain the impact of arts on individual - UA #13, ACT Comp
7.22 Explain the development of aesthetic awareness from a variety of perspectives - UA #14, ACT Comp
7.23 Determine which art from maybe most appropriate for characteristics of culture - UA #15, ACT Comp
7.24 All questions in Art, Music, Theater (AMT) of CSE (12 items)
7.25 Questions 6,7, and 8 in SU of CSE
7.26 Questions 2,8,and 9 in TC of CSE
7.27 Question 2 in CE of CSE
7.28 Questions 5 and 6 in EG of CSE
7.29 Questions b,g,j, and v in #25 of CIRP
7.30 Questions b and e in #26 of CIRP
7.31 Question e in #27 of CIRP
7.32 Questions c and h in #36 of CIRP
7.33 Questions a,k, and l in #39 of CIRP
7.34 HS art grades and subjects - SPS
7.35 HS music and art oc - SPS
7.36 HS EC/college plans in instrumental music, vocal music, and dramatics - SPS
7.37 HS YS languages - SPS
7.38 SNI languages - SPS
7.39 II arts - SPS

COHERENCY 8. INTERNATIONAL AND MULTICULTURAL EXPERIENCE - APPRECIATE ETHNIC DIVERSITY IN THE USA AND WORLD. Promote understanding and harmony among citizens of nation and world.

8.1 Cultural programs - S2 #15, SOS
8.2 Faculty attitude toward students - S3 #5, SOS
8.3 Variety courses offered - S3 #6,SOS
8.4 Flexibility in program - S3 #8,SOS
8.5 Preparation for profession - S3 #11, SOS
8.6 Racial harmony - S3 #36, SOS
8.7 Personal involvement - S3 #38,SOS
8.8 Cultural awareness ways of life - S4 EB #1, SOS
8.9 Tolerance/understanding - S4 EB #18, SOS
8.10 Social development - S4 EB #17,SOS
8.11 Understand different people - S4 EP #11, SOS
8.12 Transmit cultural values - S4 EP #3,SOS
8.13 Broadened students perspective - S4 EP #6,SOS
8.14 Enrich students cultural life - S4 EP #7,SOS
8.15 Concert - S4 CI #1,SOS
8.16 Foreign movie - S4 CI #4,SOS
8.17 Contact people different backgrounds - S4 AQ #15, SOS
8.18 Handle roles comfortably - S4 AQ #13,SOS
8.19 Handle unpopular speakers - S4 AQ #14,SOS
8.20 Exposure to arts - S4 AQ #16,SOS
8.21 Help others - S4 AQ #12,SOS
8.22 Appreciate arts - S4 AQ #6 SOS
8.23 Association with international students - S4 AQ #29, SOS
8.24 Questions 2,6,11,15 and 16 - SOS84AQ
8.25 Identify values faced in daily life in other cultures - CV O, ACT Comp
8.26 Identify major influences on values in individuals - CV Q, ACT Comp
8.27 Determine compatibility of art forms with a culture - UA #15, ACT Comp
8.28 Identify those art forms which constitute a culture - UA #11, ACT Comp
8.29 Predict consequences of new technology into culture - US #10, ACT Comp
8.30 Identify activities/products of technology that are part of a culture - US #6, ACT Comp
8.31 US #9,ACT Comp
8.32 Identify activities/institutions which make up the social aspects of culture - FSI #1, ACT Comp
8.33 Describe the structures and functions that underlie social institutions - FSI #2, ACT Comp
8.34 Explain the restraints/freedoms within social institutions and how involvement places one on conflicting or compatible situation - FSI #5, ACT Comp
8.35 Question 2 in PE of CSE

8.36 All questions in SA of CSE (10 items)
8.37 Questions 6,7, and 8 in TC of CSE
8.38 Questions 9 and 12 of EG of CSE
8.39 Questions b,f,g,l,p,q,r,v, and u in #33 of CIRP
8.40 Question q in #39 of CIRP
8.41 Question i in #40 of CIRP
8.42 HS foreign language grades and subjects - SPS
8.43 HS EC/college plans in racial/ethnic and political organizations - SPS

COHERENCY 9. STUDY IN DEPTH (VALUE OF LEARNING) DEVELOPMENT OF COMPLEX PERSPECTIVES TO CONNECT DISCRETE EDUCATIONAL EXPERIENCES WITH DAY TO DAY EVENTS.

9.1 Library - S2 #6, SOS
9.2 Credit by exam - S2 #17,SOS
9.3 Course content by major - S3 #2,SOS
9.4 Instruction by major - S3 #3,SOS
9.5 Faculty attitude toward students - S3 #5, SOS
9.6 Variety courses offered - S3 #6,SOS
9.7 Flexibility in program - S3 #8,SOS
9.8 Preparation for profession - S3 #11, SOS
9.9 Background further education - S4 EB #5, SOS
9.10 Vocabulary,terminology - S4 EB #7,SOS
9.11 Professional training - S4 EB #8,SOS
9.12 Seek and disseminate new knowledge - S4 EP #8, SOS
9.13 Demand of good scholarship - S4 NE #10, SOS
9.14 Courses opened up new interests - S4 NE #8, SOS
9.15 Knowledge/ability in academic major - S4 AQ #1, SOS
9.16 Improve grades S4 AQ #18,SOS
9.17 Use library S4 AQ #7,SOS
9.18 Knowledge/ability in career field - S4 AQ #2, SOS
9.19 Questions 17,18,and 22 - SOS84AQ
9.20 Define logical consistency in information obtained, problem definition, and solutions proposed - SP K, ACT Comp
9.21 Propose/select procedures to evaluate solutions to problems - SP M, ACT Comp
9.22 Evaluate process by which problem is solved - SP N, ACT Comp
9.23 Identify values,issues faced in daily life - CV O, ACT Comp
9.24 Analyze implications of decisions made on basis of values - CV T, ACT Comp
9.25 Infer values from behavior - CV S, ACT Comp
9.26 Analyze rationales for value choices - CV R, ACT Comp
9.27 Analyze impact of decisions made based on values - CV T, ACT Comp

9.28 Explain and predict the relationships between individual and institutions regarding freedom/restraints - FSI #5, ACT Comp
9.29 Explain impact of technology on environment - US #8, ACT Comp
9.30 Explain the impact of technology on individual/culture - US #9, ACT Comp
9.31 Predict impact of technolgy on a culture - US #10, ACT Comp
9.32 Understanding a culture one can judge the appropriateness of various art forms - UA #15, ACT Comp
9.33 Explain art appreciation from a number of perspectives - UA #14, ACT Comp
9.34 Explain impact of art on individuals - UA #13, ACT Comp
9.35 Question 10 in LE of CSE
9.36 Question 10 in CL of CSE
9.37 Question 9 in EF of CSE
9.38 Questions 4,8,and 12 in ST of CSE
9.39 Question 8 in TC of CSE
9.40 All questions in IC of CSE (6 items)
9.41 Questions 2 and 4 in RW of CSE
9.42 Questions 1,2, and 3 in CE of CSE
9.43 Questions 2,5,and 21 in EG of CSE
9.44 Question o in #25 of CIRP
9.45 Question h in #27 of CIRP
9.46 Question b in #39 of CIRP
9.47 Composite score ACTA
9.48 HS EC/college plans in debate and academic department clubs - SPS
9.49 SNI study skills, honors, independent study - SPS
9.50 GRE analytic assessment

COHERENCY 10. COMMITTMENT TO WELLNESS OF ONESELF AND OTHERS

10.1 Personal counseling use/satisfaction - S2 #2, SOS
10.2 Recreational/intramural programs - S2 #5, SOS
10.3 Health service - S2 #7, SOS
10.4 Health insurance - S2 #8, SOS
10.5 Residence hall programs - S2 #12,SOS
10.6 College social activities - S2 #14,SOS
10.7 Racial harmony - S3 #36,SOS
10.8 Religious activities - S3 #40,SOS
10.9 Intramural activities - S4 CI #6,SOS
10.10 Health service, counseling center - S4 CI #19, SOS
10.11 Attended athletic event - S4 CI #5,SOS
10.12 Personal development - S4 EB #14, SOS
10.13 Develop self-awareness - S4 EP #5, SOS
10.14 Participation in sports - S4 NE #3, SOS
10.15 Mental health maintainence - S4 AQ #9, SOS

10.16 Physical health maintainence - S4 AQ #10, SOS
10.17 Alcohol expenses - S4 AQ #28,SOS
10.18 Alcohol and studies - S4 AQ #27,SOS
10.19 Chemical abuse program - S4 AQ #28,SOS
10.20 Stress/who with - S4 AQ #25,SOS
10.21 Cause of internal stress - S4 AQ #24,SOS
10.22 Greatest cause of stress - S4 AQ #23,SOS
10.23 Belong to SDSU - S4 AQ #17,SOS
10.24 Knowing yourself - S4 AQ #11, SOS
10.25 Ability to help others define/solve problems - S4 AQ #12 SOS
10.26 Questions 2,6,7,8,9,10,11,12,13,14,18,19,and 21 - SOS84AQ
10.27 Can infer personal values from behavior - CV S, ACT Comp
10.28 Identify major influences on development of individual - CV Q, ACT Comp
10.29 Identify values faced in daily life - CV O, ACT Comp
10.30 Relationship between social institutions and individuals - FSI #3, ACT Comp
10.31 Relationship between individual involvement and social institution freedoms/constraints - FSI #5, ACT Comp
10.32 Impact of technology on environment - US #8, ACT Comp
10.33 Impact of technology on culture - US #10, ACT Comp
10.34 Impact of art/humanistic expressions on individuals - UA #13, ACT Comp
10.35 Questions 8 and 10 in EF of CSE
10.36 Questions 5 and 9 of SU in CSE
10.37 All questions in Athletic/Recreation Facilities(ARF) of CSE (6 items)
10.38 Question 3,8,9,and 10 in PE of CSE
10.39 Questions 11 and 14 in EG of CSE
10.40 Questions h,y,s,u,w,x, and z in #25 of CIRP
10.41 Questions d,j,k, and h in #26 of CIRP
10.42 Questions a,c,i,j, and l in #33 of CIRP
10.43 Question f,k,d in #37 of CIRP
10.44 Question f in #39 of CIRP
10.45 Questions j,h,p,w, and q in #40 of CIRP
10.46 HS athletic oc - SPS
10.47 HS EC/college plans in intramurals and athletics - SPS
10.48 SNI personal concerns - SPS

COHERENCY 11. COMMITTMENT TO SERVICE - APPLICATION OF KNOWLEDGE IN ACTIVELY GIVING SERVICE TO STUDENT PEER GROUPS, THE UNIVERSITY, THE COMMUNITY, THE STATE, THE NATION, AND FOR HUMANITY

11.1 Tutorial services - S2 #,SOS
11.2 Campus activities - S3 #38, SOS
11.3 Student government - S3 #39, SOS
11.4 Campus media - S3 #42, SOS

11.5 Student voice in college policies - S3 #16,SOS
11.6 Concern for individual - S3 #34,SOS
11.7 Campus elections - S4 CI #8, SOS
11.8 Campus campaigns - S4 CI #9, SOS
11.9 College student committe - S4 CI #10, SOS
11.10 Student government - S4 CI #11, SOS
11.11 Campus service organization - S4 CI #13, SOS
11.12 Campus professional organization - S4 CI #14, SOS
11.13 Campus social organization - S4 CI #15, SOS
11.14 Distributed literature - S4 CI #17,SOS
11.15 Circulated petition - S4 CI #18,SOS
11.16 Make posters,exhibits - S4 CI #20,SOS
11.17 Posters, exhibits for campus events - S4 CI #16, SOS
11.18 Provide leaders - S4 EP #2,SOS
11.19 Economic needs of society - S4 EP #4,SOS
11.20 Solve societal problems - S4 EP #9,SOS
11.21 Personal philosophy development - S4 EP #12, SOS
11.22 Friendship/loyalty development - S4 EB #15,SOS
11.23 Leadership in campus activity - S4 NE #5, SOS
11.24 Role abilities - S4 AQ #13,SOS
11.25 Ability to help others - S4 AQ #12,SOS
11.26 Questions 6,17,18,19,20, and 21 -SOS84AQ
11.27 Identify activities/institutions which makeup social aspects of culture - FSI #1, ACT Comp
11.28 Describe the structures and functions that underlie social institutions - FSI #2, ACT Comp
11.29 Explain relationship between social institutions and individuals - FSI #3, ACT Comp
11.30 Explain development/change in social institutions - FSI #4, ACT Comp
11.31 Question #5 FSI,ACT Comp
11.32 All questions in Clubs and Organizations(CO) of CSE
11.33 Questions 6 and 7 in ST of CSE
11.34 Questions 3,9, and 10 in DFS of CSE
11.35 Question 6 in CE of CSE
11.36 Questions d,e,k,l, and t in #25 of CIRP
11.37 Questions h and i in #37 of CIRP
11.38 Questions d,i, and p in #39 of CIRP
11.39 Questions e and s in #40 of CIRP
11.40 HS leadership and community service oc - SPS
11.41 HS EC/college plans in student government, publications, radio/tv, fraternity/sorority, and service organizations - SPS
11.42 SNI ROTC - SNS
11.43 II social service - SPS

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ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 2
Assessing General Education Requirements (Core)
Part B: SDSU Freshmen and Sophomore ACT Assessment Results

December, 1987

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INTRODUCTION

The importance of a set of core educational competencies for an educated person has been documented by numerous groups and individuals (Branscomb et al.,1977; Assoc. Amer. College Comm. 1985; Boyer et al., 1987; Chickering and Gamson 1987; Thrash, 1987; Cross, 1987; Blue Ribbon Panel, 1987a;1987b). As part of the 1987 assessment plan for South Dakota (South Dakota Board of Regents Assessment Comm., 1987) the need to assess the skills and qualities necessary to an educated person have been clearly defined in ACT Core Report Part A (Maeo et al., 1987).

OBJECTIVES

The objectives of this part of the report were to: 1) analyze the incoming freshmen ACT data from 1984 through 1986 (provide baseline information); 2) compare incoming ACT assessment data with national and regional norms; 3) compare incoming ACT scores with second semester sophomore ACT scores; 4) evaluate for the appropriateness and use of this instrument to assess selected CORE areas; 5) make recommendations regarding future research involving the ACT assessment instrument; and 6) identify curricula, instruction and advising questions that faculty and administrators need to address based on the data analyzed in this study.

MATERIALS AND METHODS

ACT Assessment Instrument

The ACT Assessment Instrument is a group of four academic tests developed to assess general educational development and ability to compete in a college setting (ACT, 1986a). It is usually taken during the junior/senior years of high school. The four academic tests cover subject matter in the areas of English, mathematics, social studies, and natural sciences.

English

The English test is designed to assess the student's understanding of written English, including: punctuation, grammar, sentence structure, style, logic, and organization. It stresses the ability to analyze writing (ACT, 1986a).

Mathematics

The mathematics test assesses the student's mathematical reasoning ability and stresses the solution of practical quantitative problems using reasoning. Computational skills and methodology are also evaluated (ACT, 1986a).

Social Studies

The student's ability to read, critically analyze, and evaluate social studies materials is assessed in the social studies test. Reading comprehension, the ability to draw inferences, make conclusions, extend knowledge to new situations, make deductions from data, recognize written style and reasoning are covered in this test (ACT, 1986a).

Natural Sciences

The natural sciences test measures the student's ability to read, analyze, and evaluate natural (both biological and physical) science materials. Both reading skills and general background are measured. Reading comprehension, the ability to understand purposes of an experiment, extend results to new situations and understand what will happen, the ability to make deductions from data, judge the practical value of an experiment, and evaluate alternative methods of inquiry are covered in this test (ACT, 1986a).

Population Studied and Sorts Used

Entering freshmen are required to take the ACT Assessment Test for admission to SDSU. In 1984 the number of students(n) taking the ACT Assessment Test was 1112, in 1985 n = 1053, and in 1986 n = 1155 (These numbers do not include non-traditional or foreign students). This data, along with a variety of demographic and high school information for each student, was stored on computer tape for later analysis. In response to the 1985 BOR mandate to assess CORE areas, 40% of the sophomore students in spring 1987 were randomly selected to take a different form of the ACT Assessment Test again. This allowed for comparisons of scores over a two-year period of time.

The ACT Assessment scores were sorted by gender, by college, by residency (in-state vs. out-of-state students), and by year. State (all students in South Dakota who took the test), regional (Colorado, Idaho, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah and Wyoming), and national data for 1984-1986 were used for freshmen

comparisons (ACT, 1984a; 1984b; 1985a; 1985b; 1986b; 1986c). Average ACT Assessment scores for South Dakota institutions of higher education for 1983-1985 were obtained from the South Dakota BOR offices.

Statistical Methods

Various statistical methods (paired t test, t test with unequal variances, and Fishers protected LSD) were used to analyze the data (SAS, 1982a;1982b). Where appropriate, frequency distributions and means were also calculated.

RESULTS

University Comparisons for Incoming Freshmen

University Averages

Significant differences in ACT Assessment scores (for all four areas and the composite) were found among the groups (SDSU, BOR, state, regional, and national) studied (Table 1). The average SDSU entering freshmen had significantly higher scores for all tests of the ACT Assessment when compared to all other groups studied which reflects our high admission standards. The national group had the lowest scores in every test of the ACT Assessment studied. Average scores decreased significantly as the population of the group increased.

Sorted by College (averaged 1984-1986)

English. Significant differences in ACT Assessment English scores were found amoung the colleges in which students were enrolled (Table 2). The Agricultural and Biological Sciences college had the lowest incoming ACT Assessment English scores, while the college of Pharmacy had the highest average scores (a 3.2 point spread).

Mathematics. Significant differences in ACT Assessment mathematics scores were found among the colleges in which students were enrolled (Table 3). The incoming freshmen in the Home Economics college had the lowest average ACT Assessment mathematics score, while Engineering had the highest (a 7.7 point spread).

Table 1. Mean Freshmen ACT Assessment Scores for South Dakota State University (SDSU), South Dakota Board of Regents Institutions (BOR), South Dakota (S), the Region (R) and the Nation (N) for 1984-1986.

Group	n	English Mean	Significant Group Difference	Mathematics Mean	Significant Group Difference
SDSU	3320	19.8	BOR,S,R,N**	20.6	BOR,S,R,N
BOR*	10208	19.2	SDSU,S,R,N	19.3	SDSU,S,R,N
S	17517	18.7	SDSU,BOR,N	17.8	SDSU,BOR,R,N
R	288703	18.6	SDSU,BOR,N	18.0	SDSU,BOR,S,N
N	2318002	18.2	SDSU,BOR,S,R	17.3	SDSU,BOR,S,R

Group	n	Social Studies Mean	Significant Group Difference	Natural Sci Mean	Significant Group Difference
SDSU	3320	20.6	BOR,S,R,N	24.5	BOR,S,R,N
BOR	10208	19.5	SDSU,S,R,N	23.0	SDSU,S,R,N
S	17517	18.5	SDSU,BOR,R,N	22.2	SDSU,BOR,N
R	288703	18.2	SDSU,BOR,S,N	22.1	SDSU,BOR,N
N	2318002	17.4	SDSU,BOR,S,R	21.2	SDSU,BOR,S,R

Group	n	Composite Mean	Significant Group Difference
SDSU	3320	21.5	BOR,S,R,N
BOR	10208	20.3	SDSU,S,R,N
S	17517	19.4	SDSU,BOR,N
R	288703	19.3	SDSU,BOR,N
N	2318002	18.6	SDSU,BOR,S,R

* Data only available for 1983-1985, n= number of observations.
** Groups listed are significantly different from group compared at 0.05 level using the t test with unequal variances (national variances used with BOR comparisons since data was not available).

Table 2. Mean Freshmen ACT Assessment English Scores Sorted by College(1984-1986).

College	n	Mean Score	Significant College Differences
ABS	663	18.2	AS, E, GR, HE, N, P*
AS	777	20.5	ABS, GR, P
E	600	20.5	ABS, GR, P
GR	735	19.5	ABS, AS, E, N, P
HE	161	20.0	ABS, P
N	214	20.2	ABS, GR, P
P	170	21.4	ABS, AS, E, GR, HE, N
Univ. Avg.	3320	19.8	

ABS = Agriculture and Biological Sciences, AS = Arts and Sciences, E = Engineering, GR = General Registration, HE = Home Economics, N = Nursing, and P = Pharmacy.
n = number of observations
* = colleges listed are significantly different from college compared at the 0.05 level using Fishers protected LSD.

Table 3. Mean Freshmen ACT Assessment Mathematics Scores Sorted by College(1984-1986).

College	n	Mean Score	Significant College Differences
ABS	663	19.0	AS, E, HE, P
AS	777	19.8	ABS, E, HE, P
E	600	25.3	ABS, AS, GR, HE, N, P
GR	735	19.4	E, HE, P
HE	161	17.6	ABS, AS, E, GR, N, P
N	214	19.8	E, HE, P
P	170	23.8	ABS, AS, E, GR, HE, N
Univ. Avg.	3320	20.6	

(See Table 2 for definition of footnotes and abbreviations used in this table.)

Social Studies. Significant differences in ACT Assessment social studies scores were found among the colleges in which the students were enrolled (Table 4). The incoming freshmen in the Home Economics, Nursing, and Agricultural and Biological Sciences colleges had the lowest social studies scores, while Pharmacy and Engineering had the highest (a 4.3 point spread).

Table 4. Mean Freshmen ACT Assessment Social Studies Scores Sorted by College (1984-1986).

College	n	Mean Score	Significant College Differences
ABS	663	19.5	AS, E, P
AS	777	20.7	ABS, E, GR, HE, N, P.
E	600	22.9	ABS, AS, GR, HE, N
GR	735	19.9	AS, E, HE, N, P
HE	161	18.6	AS, E, GR, P
N	214	18.8	AS, E, GR, P
P	170	22.4	ABS, AS, GR, HE, N
Univ. Avg.	3320	20.6	

(See Table 2 for definition of footnotes and abbreviations used in this table.)

Natural Sciences. Significant differences in ACT Assessment natural sciences scores were found among the colleges in which the students were enrolled (Table 5). The incoming freshmen in the Home Economics college had the lowest natural science scores, while Engineering and Pharmacy had the highest (a 6.1 point spread).

Table 5. Mean Freshmen ACT Assessment Natural Science Scores Sorted by College (1984-1986).

College	n	Mean Score	Significant College Differences
ABS	663	24.2	E, GR, HE, P
AS	777	23.8	E, HE, P
E	600	27.6	ABS, AS, GR, HE, N
GR	735	23,4	ABS, E, HE, P
HE	161	21.5	ABS, AS, E, GR, N, P
N	214	23.5	E, HE, P
P	170	26.8	ABS, AS, GR, HE, N
Univ. Avg.	3320	24.5	

(See Table 2 for definition of footnotes and abbreviations used in this table.)

Composite. Significant differences in ACT Assessment composite scores were found among the colleges in which they were enrolled (Table 6). The incoming freshmen in the Home Economics college had the lowest ACT Assessment composite scores, while Engineering and Pharmacy had the highest (a 4.7 point spread).

Table 6. Mean Freshmen ACT Assessment Composite Scores Sorted by College (1984-1986).

College	n	Mean Score	Significant College Differences
ABS	663	20.4	AS, E, HE, P
AS	777	21.3	ABS, E, GR, HE, P
E	600	24.2	ABS, AS, GR, HE, N
GR	735	20.7	AS, E, HE, P
HE	161	19.5	ABS, AS, E, GR, N, P
N	214	20.8	E, HE, P
P	170	23.7	ABS, AS, HE, N, P
Univ. Avg.	3320	21.5	

(See Table 2 for definition of footnotes and abbreviations used in this table).

When average freshmen ACT Assessment composite scores were sorted by college and compared, SDSU students had significantly higher scores than their counterparts in the region and the nation for all colleges at SDSU (Table 7). The Engineering, Home Economics, and Pharmacy Colleges had average scores at least 3 points above the national average. The higher n (number of students) of the Pharmacy College at SDSU compared to the state n is due to out-of-state students enrolled in the program. Average ACT Assessment composite scores decreased significantly as the population of the group increased.

Sorted by Residency (averaged 1984-1986)

No significant differences were found when incoming freshman ACT Assessment social studies and composite scores, sorted by residency, were compared (Table 8). Out-of-state incoming mathematics and natural science ACT Assessment scores were significantly higher than in-state values during the three-year period studied. In-state incoming freshman ACT Assessment English scores were significantly higher than out-of-state scores during the study period.

Table 7. Mean Freshmen ACT Assessment Composite Scores for South Dakota State University (SDSU), South Dakota (S), the Region (R) and the Nation (N) for 1986 Sorted by College.

	ABS			AS		
Group	n	Composite Mean	Signif Group Difference	n	Composite Mean	Signif Group Difference
SDSU	217	20.5	R,N*	293	21.3	R,N
S	473	20.4	R,N	1021	21.2	R,N
R	6831	19.8	SDSU,S	19382	20.6	SDSU,S,N
N	48265	19.7	SDSU,S	155616	20.0	SDSU,S,R

	E			GR		
Group	n	Composite Mean	Signif Group Difference	n	Composite Mean	Signif Group Difference
SDSU	228	24.1	S,R,N	241	21.1	S,R,N
S	690	22.6	SDSU,R,N	617	19.3	SDSU,R,N
R	12072	22.0	SDSU,S,N	9170	18.6	SDSU,S,N
N	102208	21.0	SDSU,S,R	73297	18.3	SDSU,S,R

	HE			N		
Group	n	Composite Mean	Signif Group Difference	n	Composite Mean	Signif Group Difference
SDSU	42	19.6	S,R,N	60	21.0	S,R,N
S	80	17.1	SDSU	398	19.7	SDSU,N
R	1193	16.7	SDSU	5217	19.6	SDSU,N
N	9257	16.1	SDSU	11260	18.2	SDSU,S,R

	P		
Group	n	Composite Mean	Signif Group Difference
SDSU	74	23.8	R,N
S	38	23.6	R,N
R	226	21.8	SDSU,S,N
N	3076	20.4	SDSU,S,R

ABS = Ag/Bio Sciences
AS = Arts/Sciences
E = Engineering
GR = General Registration
HE = Home Economics
N = Nursing
P = Pharmacy

* Groups listed are significantly different from group compared at 0.05 level using the t test with unequal variances.
n = the number of observations.
(Note: State, regional, and national groups were adjusted to reflect the same composition of majors in the colleges at SDSU.)

Table 8. Mean Freshmen ACT Assessment Scores Sorted by Residency (1984-1986).

Residency	n	Mean Score	T
English			
In-state	2531	20.0	3.61**
Out-of-state	789	19.4	
Mathematics			
In-state	2531	20.4	-3.11**
Out-of-state	789	21.2	
Social Studies			
In-state	2531	20.5	-0.81
Out-of-state	789	20.7	
Natural Sciences			
In-state	2531	24.4	-1.93*
Out-of-state	789	24.8	
Composite			
In-state	2531	21.5	-0.56
Out-of-state	789	21.6	

* significantly different at 0.1 level.
** significantly different at 0.05 level.

Sorted by Year (averaged over all other variables)

No significant differences in incoming freshmen average ACT Assessment scores in English and mathematics scores were noted during the three-year study period for SDSU students (Table 9). Social studies, natural sciences, and the composite incoming ACT assessment scores all had significant increases when 1986 was compared to 1984. No significant changes where noted from 1984 to 1985.

Significant differences in freshmen ACT Assessment scores were noted during the three-year study period for BOR students (Table 10). All scores were significantly higher in 1985 when compared to earlier years at BOR institutions.

Table 9. Mean Freshmen ACT Assessment Scores Sorted by Year for SDSU.

Year	n	English Mean	Math Mean	Soc Stu Mean	Nat Sci Mean	Composite Mean
1984	1112	19.8a*	20.8a	20.3a	24.2a	21.4a
1985	1053	19.7a	20.4a	20.5ab	24.4a	21.4a
1986	1155	20.0a	20.7a	20.9b	24.9b	21.7b

* Column means followed by the same letter are not significantly different at 0.05 level using t test with unequal variances.
n = number of observations.

Table 10. Mean Freshmen ACT Assessment Scores Sorted by Year for South Dakota Board of Regents Institutions.

Year	n	English Mean	Math Mean	Soc Stu Mean	Nat Sci Mean	Composite Mean
1983	3778	19.1a*	19.2a	19.4a	22.8a	20.2a
1984	3332	19.1a	19.1a	19.4a	23.0a	20.2a
1985	3098	19.5b	19.7b	19.6a	23.3b	20.6b

* Column means followed by the same letter are not significantly different at 0.05 level using t test with unequal variances.
n = number of observations.

Significant differences in freshmen ACT Assessment scores were noted during the three-year study period for South Dakota students (Table 11). All scores had a significant increase when 1986 was compared to 1984. In 1985 there was a significant decline in mathematics scores with a significant increase in 1986.

Table 11. Mean Freshmen ACT Assessment Scores Sorted by Year for South Dakota.

Year	n	English Mean	Math Mean	Soc Stu Mean	Nat Sci Mean	Composite Mean
1984	6261	18.6a*	17.7b	18.1a	21.8a	19.2a
1985	5782	18.5a	17.5a	18.3b	22.0b	19.2a
1986	5474	19.0b	18.3c	19.1c	22.8c	19.9b

* Column means followed by the same letter are not significantly different at 0.05 level using t test with unequal variances.
n = number of observations.

Significant differences in freshmen ACT Assessment scores were noted when individual years are compared in the three-year study period for regional students (Table 12). All scores except mathematics were significantly higher in 1986. The highest mathematics scores were reported in 1984.

Table 12. Mean Freshmen ACT Assessment Scores Sorted by Year for the Region.

Year	n	English Mean	Math Mean	Soc Stu Mean	Nat Sci Mean	Composite Mean
1984	106911	18.5a*	18.2c	18.1a	21.9a	19.3b
1985	92696	18.5a	17.8a	18.1a	22.1b	19.2a
1986	88823	18.8b	18.0b	18.5b	22.3c	19.5c

* Column means followed by the same letter are not significantly different at 0.05 level using t test with unequal variances.
n = number of observations.

Significant differences in freshmen ACT Assessment scores were noted during the three-year study period for national students (Table 13). All scores except mathematics were significantly higher in 1986. In 1985 there was a significant decline in mathematics scores with a significant increase in 1986.

Table 13. Mean Freshmen ACT Assessment Scores Sorted by Year for the Nation.

Year	n	English Mean	Math Mean	Soc Stu Mean	Nat Sci Mean	Composite Mean
1984	849560	18.1a*	17.3b	17.3a	21.0a	18.5a
1985	738836	18.1a	17.2a	17.4b	21.2b	18.6b
1986	729606	18.5b	17.3b	17.6c	21.4c	18.8c

* Column means followed by the same letter are not significantly different at 0.05 level using t test with unequal variances.
n = number of observations.

ACT Scores by Gender Averaged Over All Years (1984-1986)

Significant differences in incoming freshmen ACT Assessment scores were noted in all tests and the composite scores during the study period when gender was considered (Table 14). Entering female students had significantly higher English scores, while male students had significantly higher mathematics, social science, natural science, and composite scores in all groups studied.

Table 14. Mean Freshmen ACT Assessment Scores Sorted by Gender for Groups Studied (1984 to 1986).

Group	Gender	n	ACT Assessment Means				
			English	Math	Soc Stu	Nat Sci	Comp
SDSU	F	1522	20.8b*	19.6a	20.0a	23.4a	21.1a
	M	1768	19.0a	21.5b	21.1b	25.5b	21.9b
State	F	9818	19.3b	16.9a	17.8a	21.1a	18.9a
	M	7699	18.0a	19.1b	19.3b	23.6b	20.1b
Region	F	153895	19.2b	16.8a	17.6a	20.8a	18.7a
	M	134535	17.9a	19.3b	19.0b	23.5b	20.1b
Nation	F	1256428	18.7b	16.0a	16.7a	20.0a	18.0a
	M	1061574	17.7a	18.7b	18.3b	22.6b	19.4b

F = female, M = male, n = number of observations.
* Column means within a group (ie. SDSU) followed by different letters are significantly different at the 0.05 level using t test with unequal variances.

Significant differences in ACT Assessment scores (for all four areas and the composite) were found with female students (Table 15). The average SDSU entering female student had significantly higher scores for all tests of the ACT Assessment when compared to all other groups studied.

The national group of females had the lowest average scores in every test of the ACT Assessment. Average scores decreased significantly as the population of group increased. The largest drop occurred between SDSU and the state. SDSU is recruiting a high percentage of the top female students in the state and region.

Table 15. Mean Female Freshmen ACT Assessment Scores for Groups Studied (1984-1986).

Group	n	ACT Assessment Means				
		English	Math	Soc Stu	Nat Sci	Comp
SDSU	1522	20.8c*	19.6c	20.0d	23.4d	21.1d
State	9818	19.3b	16.9b	17.8c	21.1c	18.9c
Region	153895	19.2b	16.8b	17.6b	20.8b	18.7b
Nation	1256428	18.7a	16.0a	16.7a	20.0a	18.0a

n = number of observations.
* Column means followed by different letters are significantly different at the 0.05 level using t test with unequal variances.

Significant differences in ACT Assessment scores (for all four areas and the composite) were found with male students (Table 16). The average SDSU entering male student had significantly higher scores for all tests of the ACT Assessment when compared to all other groups studied.

The national group of males had the lowest average scores in every test of the ACT Assessment. Average scores decreased significantly as the population of group increased. The largest drop occurred between SDSU and the state. SDSU is recruiting a high percentage of the top male students in the state and region.

Table 16. Mean Male Freshmen ACT Assessment Scores for Groups Studied (1984-1986).

		ACT Means				
Group	n	English	Math	Soc Stu	Nat Sci	Comp
SDSU	1768	19.0c*	21.5d	21.1d	25.5c	21.9c
State	7699	18.0b	19.1b	19.3c	23.6b	20.1b
Region	134535	17.9b	19.3c	19.0b	23.5b	20.1b
Nation	1061574	17.7a	18.7a	18.3a	22.6a	19.4a

n = number of observations.
* Column means followed by different letters are significantly different at the 0.05 level using t test with unequal variances.

Yearly Comparisons for Incoming Freshmen

College

During each individual year studied, significant differences in ACT Assessment were found with the college in which the students were enrolled. [The number of significant differences was less in any one year because of the fewer number of observations was less causing higher variances (ie., n=227 in 1984 versus n=663 for 1984-1986 for the Agriculture and Biological Sciences College)]. The trends for each individual year were the same as those described earlier with Tables 2 thru 6.

When the data was first sorted by college and then by year, only the General Registration and Home Economics Colleges had significant differences between years for social studies and natural sciences (Table 17). Only the General Registration College had a significant difference in ACT Assessment composite scores when individual yearly mean scores were compared.

Table 17. Significant Differences in Yearly ACT Assessment Means Sorted by College.

College	English	Math	Social Studies	Natural Science	Composite
ABS	NS	NS	NS	NS	NS
AS	NS	**	NS	NS	NS
E	NS	NS	NS	NS	NS
GR	NS	NS	**	**	**
HE	NS	NS	**	**	NS
N	NS	NS	NS	NS	NS
P	NS	NS	NS	NS	NS

NS = No significant difference between the three yearly means studied at 0.05 level using Fisher's protected LSD.
** = Significant difference in yearly mean values studied.

Gender

In each of the three years studied, incoming female students had significantly higher ACT Assessment English scores while male students had significantly higher mathematics, social studies, natural science, and composite scores each year. This trend was the same as that described earlier (Table 14).

During each individual year studied entering SDSU female and male students had significantly higher ACT Assessment scores than the averages for BOR institutions, the state, region, and nation. This was the same trend as discussed with Tables 15 and 16.

Residency

During each of the three individual years studied, incoming out-of-state students had significantly higher mathematics and natural science ACT Assessment scores while in-state students had significantly higher English ACT Assessment scores. No significant differences in social studies and composite ACT Assessment scores were noted in any of the three years studied. This was similar to the trend described earlier (Table 8).

No significant differences were found between years for English and mathematics ACT Assessment scores for in-state students (Table 18). Significantly higher scores for social studies, natural science, and the composite in 1986 were noted for in-state freshmen entering SDSU.

No significant differences were found between years for English, mathematics, natural sciences and the composite ACT Assessment scores for out-of-state students. Only the yearly social studies scores varied significantly during the study period (Table 18).

Table 18. Mean Freshmen ACT Assessment Scores Sorted by Residency and Year.

ACT Test	In-State			Out-of-State		
	1984	1985	1986	1984	1985	1986
English	19.9a*	19.9a	20.1a	19.4a	19.1a	19.6a
Math	20.5a	20.2a	20.6a	21.7a	21.0a	21.0a
Soc Stu	20.1a	20.6ab	20.8b	20.7ab	20.2a	21.1b
Nat Sci	24.1a	24.3a	24.9b	24.5a	24.9a	24.9a
Composite	21.3a	21.4ab	21.7b	21.7a	21.4a	21.8a
n	897	816	908	305	237	247

n = number of observations.
* = Row means with the same residency and followed by the same letter are not significantly different at 0.05 level Fisher's protected LSD.

Sophomore Versus Freshmen Differences in ACT Scores

Approximately one-third of the entering 1985 freshmen were selected to retake a different form of the ACT Assessment in the spring of 1987 (Table 19). Since this represented a matched pair of data for each student selected, a paired t test analysis was used. It is important to note that this data is for one class only and needs to be continued to gather more data to verify the trends observed in this study.

University

Significant increases in ACT Assessment scores on all parts of the test were noted (Table 19). These changes represent increases of 7% in English, 6% in mathematics, 4% in social studies, 3% in natural sciences, and 4% in composite scores.

Residency

No significant changes in ACT Assessment scores were noted when sophomore and freshmen scores were compared for the students from Iowa, while students from South Dakota did significantly better (higher sophomore scores) in all parts of the assessment (Table 19). Students from Minnesota had significantly higher English, mathematics, and composite scores.

Gender

Female students had significant increases in all parts of the ACT Assessment except natural sciences, while male students had significant increases in everything except social studies (Table 19).

Table 19. Mean Changes in ACT Assessment Scores (1985 Freshmen vs. 1987 Sophomore) for Matched Students at the University and Sorted by Residency and Gender.

ACT TEST	All University	Residency			Gender	
		Iowa	Minn	SD	Female	Male
English	1.3**	-0.5	1.1**	1.4**	1.6**	1.0**
Math	1.2**	-0.7	1.4**	1.3**	1.2**	1.2**
Soc Sci	0.7**	1.8	0.5	0.6**	1.0**	0.4
Nat Sci	0.6**	-0.7	0.7	0.6**	0.2	1.0**
Composite	0.8**	0	0.8*	0.8**	0.9**	0.7**
n	407	17	67	313	206	201

* = significantly higher (sophomore greater than freshmen) mean score at 0.1 level for the group listed. A negative number means the scores declined from freshmen to sophomore.

** = significantly higher (sophomore greater than freshmen) mean score at 0.05 level for the group listed.

n = number of observations

(NOTE: COMPARISONS BETWEEN GROUPS WERE NOT AND CAN NOT BE MADE SINCE SIGNIFICANT DIFFERENCES BETWEEN INCOMING GROUPS WERE NOTED EARLIER.)

College

The parts of ACT assessment which had significant increases varied with the college studied (Table 20). These differences are due to the different skill levels of the entering students, the number of

observations, the curricula of the colleges, and when students take core courses. Consequently, one should not compare between colleges but rather look at the change that is occurring within a college. For example, in the Agriculture and Biological Sciences college no significant change in mathematics score was noted. That may or may not be important. One needs to consider the starting skill level of the students in mathematics, the mathematics requirements for the college, the desired mathematics skill level needed, how is math being used in college courses, and when do students take the math course in their college program (since this was a sophomore evaluation).

Table 20. Mean Change in ACT Assessment Scores (1985 Freshman vs. 1987 Sophomore) for Matched Students by College.

ACT Test	College						
	ABS	AS	E	GR	HE	N	P
English	1.2**	1.7**	0.9**	1.3**	1.6**	1.1**	0.7
Math	0.0	1.6**	1.8**	2.0**	1.4**	0.4	0.0
Soc Sci	0.9	0.8	0.1	0.3	0.6	1.1	1.8
Nat Sci	1.1**	-0.2	0.4	1.3**	1.1	0.4	0.2
Composite	0.7**	0.9**	0.7**	1.1**	1.1**	0.6	0.6
n	76	94	79	83	21	29	25

** = Significantly higher (sophomore greater than freshmen) mean score at 0.05 level for the college listed. A negative number means the score declined from freshmen to sophomore.
n = number of observations

(NOTE: COMPARISONS BETWEEN COLLEGES WERE NOT AND CAN NOT BE MADE SINCE SIGNIFICANT DIFFERENCES BETWEEN INCOMING GROUPS WERE NOTED EARLIER.)

There are no state, regional or national norms with which to compare our results. The state of Missouri has instituted a plan to evaluate students at the end of their sophomore year using this instrument. However, they are only in the second year of their program and the data is not yet available (ACT, 1987 personal communication). Northeast Missouri State University has used this program successfully for the past 13 years (Northeast Missouri State University, 1984). Other BOR institutions in South Dakota have also used this instrument for sophomore assessment. The release of that information to allow us to determine if our results are comparable to the averages of all BOR institutions has not been given by the other BOR institutions (part of three year moritorium agreement). This information will be available in the fall of 1988.

RECOMMENDATIONS

Many institutions that have implemented an assessment program have incorporated the use of standardized instruments to conduct pre-test/post-test of a population. This methodology has permitted these institutions to determine whether or not the undergraduate educational experience has had any effect on student scores on a given standardized instrument.

This report analyzed the ACT Assessment. The instrument is convenient to use in an institutional assessment program because, at many institutions, it is required as a part of the Admissions process. Many institutions have used the ACT Assessment to obtain post-test scores on the same population of students.

The ACT Assessment is useful in examining differences among the variables (groups) identified in this part of the report. However, the instrument is not specifically designed to measure student gain in scores as a function of the undergraduate experience. Other instruments are being developed to measure the undergraduate effect. Among those are the ETS Academic Profile and the ACT Proficiency Test. Neither of these instruments have been developed beyond the pilot test stage.

The recommendations as a result of this study are:

1) continue the use of the ACT Assessment instrument in a pre-test/post-test fashion with post-test administered to graduating seniors within the same population.

2) ACT Assessment be administered annually to entering freshmen and periodically to graduating seniors.

3) during alternating years other instruments (e.g. ETS Academic Profile, surveys, ACT Academic Proficiency Test) be administered to freshmen and seniors in the same population.

4) after four years, a decision should be made about which instrument(s) will be used for future pre-test/post-test assessment based upon which instrument(s) yield(s) the best measure of the undergraduate general education experience.

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ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Report Number 3
Assessment and Admissions

December, 1987

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EXECUTIVE SUMMARY

Assessment and Admissions

Crucial to the success of South Dakota State University as an educational institution is the recruitment and retention of well-prepared and highly motivated students. Assessment procedures, such as those being developed at SDSU, have the potential for assisting the Admissions Office in recruiting and retaining the kind of undergraduate student clientele best able to fully participate in a quality education experience. This report focuses on that recruitment and retention.

To facilitate the activities of the SDSU Admissions Office, the Assessment Team sought answers to two questions identified by the Admissions Office personnel as crucial to the success of their programs. The first focused on the comparability of students from the different recruitment regions targeted by SDSU. Specifically, regional variations in terms of educationally relevant characteristics were investigated. The second question dealt with student attrition from SDSU. This question was answered by comparing the characteristics of students who enter SDSU but who do not stay to obtain a degree to those of students who obtain an undergraduate degree from SDSU.

Briefly, the results of the twin investigations are as follows. In terms of the first question, students attending SDSU were found to be highly comparable in terms of the available indicators, regardless of the region from which they were recruited. Illustrative of this point are the results for educational readiness (as measured by the ACT Assessment). While there were regional differences among the specific components, the overall educational readiness of students did not differ significantly from region to region. The comparability of the students from various regions can also be seen in the results on motivational indicators. When asked why they had chosen to attend SDSU, only one answer was given by all of the students as the most important reason--SDSU's academic reputation. And when asked about the rank order of their choice of college, SDSU was the first choice of the vast majority of all students from all marketing regions. These results suggest that regional variation in the academic readiness and educational motivation of students is not a major concern for SDSU

The results for the attrition question are not as consistent as are those for the regional variation question. Students who leave SDSU are not as educationally well prepared as are those who stay, nor do they do as well academically while at SDSU. Interestingly, males are far more likely to leave than are females, and colleges vary enormously in their retention rate. Surprisingly, neither their parents' income level, nor the level of parents' educational attainment, nor the extent of a student's high school academic training (i.e., the number of English, math, and science courses taken) maintain a systematic relationship with a student's likelihood of staying at SDSU. These results imply there is much to learn about why students stay to obtain a degree at SDSU.

ASSESSMENT AND ADMISSIONS

INTRODUCTION

As part of the assessment project at SDSU, the Assessment Team worked extensively with the Office of Admissions, especially with the Director of Admissions, Dr. Dean Hofland. The purpose was to determine how the Assessment Team could best contribute both to the current operations and to the long range planning of the Admissions Office while, at the same time, fulfilling its mandate. Given the extensive experience and expertise of the personnel in the Admissions Office, it was obvious that the most advantageous strategy for the Assessment Team was to rely on that experience and expertise to help map out the exact activities which should be undertaken. The following report represents a compilation of the information the Assessment Team obtained in this cooperative effort.

THE POTENTIAL CONTRIBUTION OF ASSESSMENT TO SDSU ADMISSIONS

The practical nature of the experiences and challenges faced by the personnel of the Admissions Office have lead them to formulate several major questions which they felt needed to be answered. After reviewing the questions, the Assessment Team determined that, given the available resources of time and data, only two could be adequately answered. Those two questions, along with the procedures employed and the answers compiled, constitute the remainder of this report.

Regional Variation

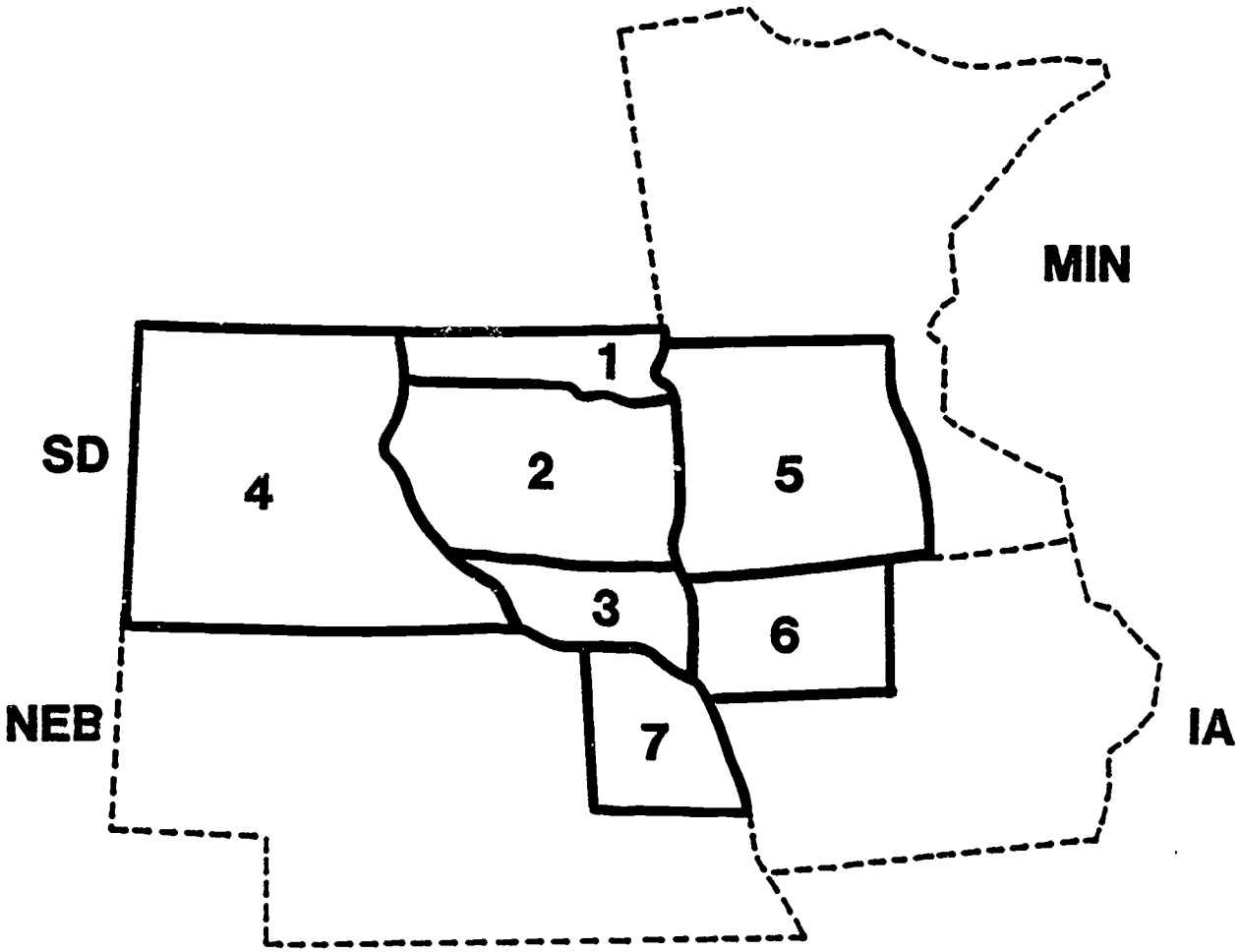
The first of the Admissions Office questions can be stated as follows:

Are there educationally salient differences among the students from the different marketing regions which SDSU seeks to serve?

Rational for Question.

From both an educational and admissions standpoint, this is a question with substantial implications. As for the former, the educational backgrounds of students from outside, or from various regions within, South Dakota are clearly of relevance in the effort to provide a quality education at SDSU. (See the figure entitled "Recruiting Regions for South Dakota State University" for a graphic representation of the seven marketing regions targeted by the Admissions Office.) We can note, for example, that South Dakota has begun to mandate higher minimum requirements for high school graduates. To what extent do these enhanced requirements for graduation from a South Dakota high school produce students similar to, or different from, students graduating from

Recruiting Regions for South Dakota State University



1) North East South Dakota
2) East Central South Dakota
3) South East South Dakota
4) West River, South Dakota
5) South West Minnesota
6) North West Iowa
7) North East Nebraska

high schools in other states? It is also possible there exists within-state regional variations among the students who attend SDSU. The comparability of the recruits from various states and from within South Dakota regions will impact the educational activities undertaken by SDSU since the background students bring to the classroom affects what an instructor can, and cannot, do with any given class.

With respect to the recruitment implications, the regional variation question is important for at least two different reasons. First, if out-of-state recruits are different from students from within South Dakota, the issue arises as to whether the differences represent an educational benefit or an educational liability. If the determination is made the differences represent an educational value, there is little reason for concern. If, however, the difference represents an educational liability (e.g., if the out-of-state students are not fully prepared to benefit from the educational opportunities at SDSU), the issue of the educational cost of such students should be addressed.

The second reason the regional variation question is important from a recruitment standpoint is because of the impact the answers have on the marketing tactics developed by the Admissions Office. If SDSU wants to continue to improve, or even expand, its current recruitment procedures, the Admissions Office must know the characteristics of the students in its marketing regions in order to develop more effective marketing tactics.

Strategy for Answer.

At present SDSU is compiling a wealth of data using a variety of instruments on currently enrolled students. (See Kris M. Smith, Assessment Program: Data by Instrument, Assessment and Testing Office, 1986.) While virtually all of these instruments have the potential for providing information useful in answering the regional variation question, at present only three -- the ACT Assessment, the ACT COMP, and the CIRP -- have been used in such a way that valid regional comparisons are possible. The other instruments currently used to monitor SDSU students are administered only after the students have been at SDSU for some period of time. Thus, regional comparisons made with these instruments are invalid since the results are contaminated by the educational process itself.

The ACT Assessment, designed to measure a student's abilities in English, mathematics, social studies, and natural science, is the test required for admission to SDSU. Since virtually all entering freshmen students must have taken the ACT Assessment prior to admission into SDSU, it is useful as a source of baseline data with which to compare those who successfully complete a SDSU degree and those who do not. The two types of students not required to take the ACT to gain admission to SDSU are non-traditional students and foreign students.

In the Fall of 1985, the ACT COMP -- an instrument designed to measure the acquisition of skills and knowledge during the college/university experience -- was administered to a fifty percent subsample of incoming freshmen. While not technically designed in such a way as to distinguish among students entering college, the Assessment Team decided to evaluate the ACT COMP as a potential indicator of the educational readiness needed to successfully accomplish college-level work.

The final instrument potentially useful in answering the regional variation question -- the CIRP -- is a questionnaire developed as part of a UCLA-based long-term study of young people entering college in the United States every year. Included in the survey are items which provide information on demographic characteristics, secondary school background, college finances, aspirations, attitudes and values, and orientation toward college. South Dakota State University administered the CIRP survey to all freshmen entering SDSU in the Fall of 1986. The procedures employed yielded a response rate of approximately 60 percent.

Results: Variation Among Students from Different Recruiting Regions.

Students can be compared using a variety of different perspectives. Given that the regional comparisons made here are from an Admissions Office perspective, two criteria -- academic preparation for college work and motivation for attending SDSU -- are employed. Presented in Table 1 are data on the first criteria and in Tables 2 and 4 are data on the second.

Perhaps the most striking conclusion which can be drawn from the data contained in Table 1 is the degree of similarity among the students from the different regions. There are no statistically significant differences among the regions for the ACT Assessment over-all score. However, there are significant differences among the regions for two of the subparts of the ACT Assessment instrument -- math and natural sciences. Focusing first on the results for the math component, two regions stand out as being substantially different from the other recruitment regions. Those two are South Dakota's West River, where average scores are about two points below the averages for other regions, and North West Iowa, where the average is almost three points above other regional averages. The comparison of the West River average with that of North West Iowa yields an even more striking difference of over four and one-half points.

Turning to the results for the natural science component, the differences, although statistically significant, are far smaller than for the math component. Indeed, the total difference is only about two points, ranging from 23.24 for students from the West River region to 25.39 for those from North East South Dakota.

Table 1. Selected Characteristics of Students from SDSU's Regional Recruitment Areas

Instrument/ Characteristic	Marketing Regions[1]					
	North East South Dakota (105)	East Central South Dakota (449)	South East South Dakota (158)	West River (130)	South West Minn. (108)	North West Iowa (35)
ACT ASSESSMENT[2]						
1) Overall Score	22.36	21.36	21.23	20.38	21.24	21.86
2) Math**	21.01	20.25	20.73	18.14	20.84	22.86
3) English	20.50	19.88	19.54	19.65	18.96	19.06
4) Natural Science*	25.39	24.21	24.35	23.24	24.76	25.06
5) Social Science	21.94	20.62	19.85	20.12	19.85	20.17
ACT COMP[3]						
Over-All Score	174.53	174.57	174.68	168.81	171.63	176.31

* = Differences are statistically significant at $pr < .05$.
** = Differences are statistically significant at $pr < .001$.
[1]Students who could not be categorized as being from one of the recruiting regions were excluded from the analysis. Nebraska was excluded from the analysis due to the excessively small number of students from that state.
[2]The material contained in this section was obtained from the ACT Assessment.
[3]The material contained in this section was obtained from the ACT COMP.

At present, we cannot explain the differences among the regions with any degree of certainty. It is possible, however, that the below average scores for West River students can be partially explained by the understandable preference of many students from West River for attending the South Dakota School of Mines. To the extent that this preference exists, West River students whose academic strenghts are in math and natural sciences would not attend SDSU. Thus, West River students who attend SDSU are probably those with strengths in other areas.

When the results for the ACT COMP were examined for differences among the regions, no statistically significant differences were found for the over-all score. And when the results (not shown in Table 1) for each of the subparts were examined, the same trend was found -- no statistically significant differences among the regions.

Given the number of colleges/universities in the SDSU marketing region, it is potentially useful to ask why students who choose to attend SDSU do so, and to ask whether there are regional variations in the reasons they give. In 1986, entering freshmen taking the CIRP provided information on this motivational question when they were asked to evaluate the importance of various factors influencing their decision to attend SDSU. (Refer to Appendix A for the exact wording of this question.) Presented in Table 2 is the distribution, by marketing region, of their answers.

What is immediately apparent, even from a cursory inspection of the data, is the impressive extent of similarity among the students from the various regions. Even though there are some exceptional patterns, for the most part there is great consistency in the responses. In general, the factors considered important by the students in any one region are considered important by those in the other regions, and the factors considered relatively unimportant by students in one region are considered unimportant by students in the other regions.

There is, however, one specific instance of this consistency which stands out above all of the rest and which should be noted. When asked about the importance of SDSU's academic reputation in influencing the decision to attend SDSU, the majority of students from every region claimed it was a "very important" reason. No other reason was so highly valued. Clearly, the positive perception students have of SDSU's academic reputation plays an important part in their decision to attend.

A second immediately obvious conclusion that can be drawn from the data in Table 2 is the extent to which "perceptions" of SDSU play a more crucial part in a student's decision to attend SDSU than do "people". When asked about the importance of relatives, friends, guidance counselors, teachers, and SDSU recruiting, in virtually every instance, a majority of all students from every region reported them to be "not important". However, when asked about issues related to perceptions of SDSU (e.g., academic reputation, job placement of SDSU graduates, entrance to professional schools by SDSU graduates, and SDSU's social reputation), students consistently credited them as being either "somewhat important" or "very important." It should be noted at this point that an incorrect interpretation of these results would be "people are unimportant" in the college selection process. After all, perceptions do not exist in a vacuum. The perceptions, and the information upon which they are based, may in fact come from relatives, friends, counselors, and SDSU recruiting procedures. Unfortunately, the data do not speak to the issue of the origin of the perceptions, only to their perceived importance.

One last comment pertaining to Table 2 is appropriate. Not unexpectedly, SDSU students felt the cost of attending college was an important factor influencing their decision to attend SDSU. Depending upon the region under consideration, anywhere from 73% to 92% of the students claimed Low Tuition to be either "somewhat important" or "very important" for their decision.

Table 2. Percent Distribution of the Importance of Reasons Given for Attending SDSU, By Recruiting Region.[1]

Reasons	Marketing Regions[2]					
	North East South Dakota (51)	East Central South Dakota (229)	South East South Dakota (77)	West River (75)	South West Minn. (64)	North West Iowa (24)
Relatives:						
Not Important	58.8	68.1	68.8	81.3	64.1	70.8
Somewhat Important	31.4	25.3	22.1	17.3	28.1	16.7
Very Important	5.9	3.1	5.2	0.0	4.7	8.3
Teacher:						
Not Important	54.9	67.7	63.6	70.7	60.9	83.3
Somewhat Important	37.3	26.6	31.2	24.0	29.7	8.3
Very Important	3.9	2.2	0.0	2.7	6.3	4.2
Academic Reputation:						
Not Important	2.0	3.9	0.0	2.7	1.6	0.0
Somewhat Important	39.2	36.2	36.4	40.0	31.3	41.7
Very Important	56.9	56.8	61.0	56.0	64.1	54.2
Social Reputation:						
Not Important	3.9	12.7	11.7	14.7	12.5	8.3
Somewhat Important	56.9	54.2	48.1	52.0	51.6	58.3
Very Important	35.3	30.6	35.1	30.7	32.8	29.2
Offered Financial Assistance:						
Not Important	37.3	43.7	41.6	56.0	62.5	54.2
Somewhat Important	45.1	28.4	23.0	14.7	29.7	29.2
Very Important	13.7	24.0	27.3	26.7	4.7	12.5
Special Education Programs:						
Not Important	45.1	37.6	39.0	37.3	39.1	37.5
Somewhat Important	39.2	39.3	31.2	40.0	35.9	33.3
Very Important	13.7	20.1	23.4	18.7	21.9	25.0
Low Tuition:						
Not Important	17.7	15.3	10.4	24.0	14.1	4.2
Somewhat Important	49.0	48.9	54.6	37.3	54.7	62.5
Very Important	31.4	31.9	31.2	36.0	26.6	29.2
Guidance Counselor Advise:						
Not Important	45.1	66.4	58.4	69.3	54.7	66.7
Somewhat Important	43.1	23.1	32.5	26.7	34.4	29.2
Very Important	7.8	6.5	3.9	1.3	7.8	0.0

Continued On Following Page

Table 2 (con't)

Reasons	Marketing Regions[2]					
	North East South Dakota (51)	East Central South Dakota (229)	South East South Dakota (77)	West River (75)	South West Minn. (64)	North West Iowa (24)
Wanted To Live Near Home:						
Not Important	47.1	31.0	46.8	82.7	39.1	12.5
Somewhat Important	43.1	48.0	37.7	12.0	42.2	70.8
Very Important	7.8	17.5	10.4	2.7	15.6	12.5
Friend's Suggestion:						
Not Important	52.9	58.1	58.4	58.7	53.1	50.0
Somewhat Important	39.2	32.8	33.8	30.7	32.8	33.3
Very Important	5.9	5.2	2.6	9.3	10.9	12.5
SDSU Recruiting.						
Not Important	76.5	80.8	83.1	85.3	81.3	85.5
Somewhat Important	19.6	13.1	10.4	10.7	10.9	8.3
Very Important	0.0	1.8	1.3	1.3	4.7	0.0
Entrance to Professional Training:						
Not Important	39.2	45.0	44.2	36.0	39.1	41.7
Somewhat Important	43.1	33.6	27.3	47.7	34.4	37.5
Very Important	13.7	16.2	23.4	14.7	23.4	16.7
SDSU Grads Get Good Jobs:						
Not Important	11.8	14.0	10.4	10.7	7.8	8.3
Somewhat Important	41.2	38.	36.4	45.3	37.5	33.3
Very Important	43.1	41.9	47.8	40.0	48.4	54.2
First Choice College Didn't Offer Fin. Aid:						
Not Important	90.2	83.8	84.4	88.0	89.1	91.7
Somewhat Important	2.0	8.7	6.5	4.0	6.3	4.2
Very Important	2.0	2.2	2.6	5.3	1.6	0.0

[1]The material contained in this table was obtained from the CIRP. The percentages do not total 100 percent due to round-off error or to non-applicable responses.

[2]Students who could not be categorized as being from one of the recruiting regions were excluded from the analysis. Nebraska was excluded from the analysis due to the excessively small number of students from that state.

Given the relative importance SDSU freshmen assign to the issue of educational finances, income is a factor which should be used in any set of regional comparisons. Presented in Table 3 is a comparison of the average family income (based upon student estimates) of students from each marketing region. Given the way in which the data was collected on the ACT form, precise statements are not possible. However, several general comments can be made. First, students from North West Iowa tend to come from families with sustantially higher incomes than do students from the other marketing regions. While over forty percent of North West Iowa students come from families with incomes exceeding $36,000, the next two regions with the most "affluent" families -- East Central South Dakota and South East South Dakota -- both have only slightly more than twenty percent of their families with incomes above $36,000.

Table 3. Percent Distribution of Freshmen Family Income, By Marketing Region[1]

Family Income*	Marketing Regions[2]					
	North East South Dakota (96)	East Central South Dakota (395)	South East South Dakota (152)	West River (117)	South West Minn. (84)	North West Iowa (27)
<$6,000	8.3	8.9	9.2	11.1	11.9	11.1
$6K-$12K	12.5	11.1	15.1	14.5	7.1	0.0
$12K-$18K	16.7	12.9	19.7	11.1	14.3	7.4
$18K-$24K	16.7	18.2	17.1	18.0	21.4	18.5
$24K-$30K	12.5	12.4	9.9	13.7	14.3	7.4
$30K-$36K	14.6	14.4	7.9	14.5	16.7	14.8
$36K-$42K	10.4	5.3	3.3	6.0	8.3	3.7
$42K-$50K	1.0	8.1	6.6	3.4	2.4	11.1
$50K-$60K	7.3	8.1	9.9	3.4	1.2	22.2
>$60K	0.0	0.5	1.3	4.3	2.4	3.7

* = Differences are statistically significant at $pr < .001$.

[1]The material contained in this table was obtained from the ACT Assessment.

[2]Students who could not be categorized as being from one of the recruiting regions were excluded from the analysis. Nebraska was excluded from the analysis due to the excessively small number of students from that state.

The second comment that can be made about the income distribution in Table 3 is that with the exception of North West Iowa, the majority of all families from all regions have incomes of less than $24,000 per year. Excluding North West Iowa (which has only thirty-seven percent of its families below $24,000), the percentage of families making less than $24,000 ranges from 51.1 percent for East Central South Dakota to 61.2 percent for South East South Dakota.

While these data are interesting and potentially useful, one caveat is required. The validity of these data for SDSU students has not been demonstrated. It is well known that the income of the self-employed (and especially that of farmers) is difficult to estimate. To what extent do such difficulties affect the accuracy of the estimates of family income? More generally, to what extent do students as a whole have an accurate grasp of the income of their parents? At present, these questions cannot be answered.

In the final set of regional comparisons presented here, the focus shifts to the preference for SDSU as the university of choice for SDSU freshmen. Presented in Table 4 are the frequency distributions, by marketing regions, of the rank order of that preference. What is evident from this data is that the vast majority of students from every marketing region claim SDSU to be their college of first choice. For every region except South Dakota's West River (where the percentage was almost 70 percent), more than eight out of every ten students stated that SDSU was their first choice for a college. Again, the degree of comparability among students from the different marketing regions is impressive.

Table 4. Percent Distribution of Freshmen Preferences for SDSU as Their Choice of College, by Marketing Region.[1]

Choice	Marketing Regions[2]					
	North East South Dakota (51)	East Central South Dakota (229)	South East South Dakota (77)	West River (75)	South West Minn. (64)	North West Iowa (24)
First Choice	92.2	81.2	84.4	68.0	87.5	83.3
Second Choice	7.8	13.5	14.3	25.3	9.4	12.5
Third Choice	0.0	3.9	1.3	5.3	1.6	0.0
Lower Than Third Choice	0.0	1.3	0.0	1.3	1.6	4.2

[1]The material contained in this table was obtained from the CIRP.
[2]Students who could not be categorized as being from one of the marketing regions were excluded from the analysis. Nebraska was excluded from the analysis due to the excessivley small number of students from that state.

Attrition

The second question the Admissions Office wanted answered can be stated as follows:

Are there important differences among those students who graduate with a degree from SDSU and those who do not?

Rationale for Question.

For very obvious practical reasons, this is a crucial question with which the Admissions Office must deal. After all, only about fifty percent of the freshmen who enter SDSU in any given year ultimately earn a degree from SDSU. Why? Despite the obviously negative implications of this statistic, quite possibly the explanation has absolutely nothing to do with the quality of education available at SDSU. For example, some students who enroll may eventually realize they did not want to be in college, or they may discover their true educational or occupational interest only after entering SDSU and then learn that the relevant major is unavailable at SDSU, or they may discover they are simply financially unable to continue in college. Thus, the fifty percent "non-graduation" rate may be educationally meaningless.

However, the fifty percent non-graduation rate may, in fact, be highly educationally and/or organizationally significant. It may mean SDSU is recruiting well, getting "good to excellent" students, and then doing such a poor job of providing a quality education that many students leave. Or, it may mean that while good students are attending SDSU, and that SDSU is providing a quality education, its recruiting procedures are such that they are producing a student clientele that should be attending some other type of college or university.

The policy implications of the attrition question are also enormous. If the reasons for the attrition are truly beyond the control of the management, faculty, and staff of SDSU, then they should turn their attention to matters that are within their control. If, however, the attrition is a function of an inadequate educational experience being provided at SDSU, or is a function of the faulty recruitment of students to SDSU, then these problems must be addressed in order to ensure that an appropriate quality education be guaranteed to any student who attends SDSU.

Strategy for Answer.

As with the regional variation question, the three most important potential sources of information applicable to the attrition question are the ACT Assessment, the ACT COMP, and the CIRP. Currently, only these three have been used in such a way that the "non-returners" (i.e., students who enter SDSU as freshmen but who do not earn a degree) and "returners" (i.e., those who are actively pursuing a degree or who have completed an undergraduate degree) can be meaningfully compared.

Results: Differences Between Returners and Non-returners.

As can be ascertained from an examination of Table 5, there are important differences between those students who decide to return to SDSU for their sophomore year and those who do not. In terms of academic readiness, the non-returners are far weaker than are the students who return; for every comparison on the ACT Assessment, non-returners have significantly lower scores than do students who return. The disparity ranges from a low of slightly more than one point on the natural science component to a high of almost three points on the math component. Supportive of the conclusion that educational preparation is an important factor in the attrition question is the academic performance of the non-returners during their freshmen year. While returning students compiled an average GPA of 2.65, non-returning students had a 1.91 GPA.

One comment is appropriate at this point. While returning students differed from non-returning students on both the ACT Assessment and average GPA, they did not differ on the ACT COMP. The reason for the discrepancy is unclear. At present, a reasonable hypothesis is that the ACT COMP was never designed to be used in the way it is being used here. It was, after all, designed to measure the adult functioning skills that are supposed to be taught throughout the college experience. Since the ACT COMP was given at the beginning of the freshmen year, it is reasonable there would be no important differences between the returning and non-returning students since neither group had experienced any college training when the instrument was administered.

A second way in which returners were compared to non-returners was to investigate the characteristics of the two sets of students which might in some way affect the return rate. Presented in Table 6 is information on the sex of the two groups of students, on the college in which they were enrolled as freshmen, and on their estimated family income. As can be seen from the data, when sex and college major are introduced into the investigation, impressive differences emerge. Males are far more likely to leave SDSU after their freshmen year than are females; almost one in four of all males entering SDSU in 1985 did not return in 1986, versus approximately sixteen percent of comparable females. Even more startling are the differences when the college majors of the two groups are compared. The non-return rate ranges from almost non-existent (six percent) for the College of Pharmacy to over 25% for the College of Agriculture and Biological Sciences.

While the investigations necessary to determine explanations for either of these disparities have not yet been carried out, they both deserve careful consideration. And while at present there is no fully developed hypothesis explaining either of the disparities, there is one factor which potentially explains the exceptionally high non-return rate for the College of Agriculture and Biological Sciences. Unlike any of the other colleges, the Ag-Bio College houses a two year agricultural program which has no minimum requirements. This program is, in effect, a "back door" into SDSU for those who cannot meet the requirements all other students must meet. Given this "open admissions" program within

Table 5. Selected Characteristics of 1985 Freshmen: Non-Returners Compared to Returners.[1]

Instrument/ Characteristic	Attrition Category[2]			
	Freshman Non-Returners 1985-1986 (N=222)	Sophomore Returners 1985-1987 (N=881)	Junior Returner 1985-1988	Senior Returner 1985-1989
ACT ASSESSMENT				
1) Overall Score**	19.92	21.68	(The material for Junior and Senior returners will be available late in the Fall Semester of 1987 and 1988, respectively.)	
2) Math **	18.01	20.90		
3) English**	18.81	19.90		
4) Natural Science*	23.39	24.63		
5) Social Science**	18.95	20.84		
GRADE POINT AVERAGE**	1.91	2.65		
ACT COMP Overall Score	167.80	173.54		

* = Differences are statistically significant at pr. < .01.
** = Differences are statistically significant at pr. < .001.
[1]The material contained in this table was obtained from the ACT Assessment, ACT COMP, and SDSU Admissions Office.
[2]Students were labeled according to the year they entered SDSU and according to when they left. Those in the 1985-86 category entered in 1985, but did not attend the following year; 1985-87 students entered in 1985 and attended the Fall of 1986.

the College, and the fact that the educational strength of students has already been shown to be an important factor in the non-return rate, a high non-return rate for students within the Ag-Bio College should not be surprising. Whether this two year program totally accounts for the high non-return rate is not known. Further, there is some question as to whether this "back door" is still open. There are, apparently, attempts to discourage current applicants from using the two year program as an entry into SDSU. The extent to which these attempts will affect the present and future non-return rate of the College of Agriculture and Biological Sciences is currently unknown.

Table 6. Percent Distribution of Personal Characteristics: Non-Returners Compared to Returners[1]

Instrument/ Characteristic	(N)	Attrition Category[2]			
		Freshman Non-Returners 1985-1986	Sophomore Returners 1985-1987	Junior Returner 1985-1988	Senior Returner 1985-1989
Sex*				(The material for Junior and Senior returners will be available in the Fall of 1987 and 1988, respectively.)	
Male	(492)	23.2	76.8		
Female	(493)	15.6	84.4		
College					
Ag & Bio	(231)	26.4	73.6		
Art & Sc	(253)	22.1	77.9		
Engineer	(186)	16.1	83.9		
Gen Reg	(249)	19.7	80.3		
Home Ec	(62)	19.4	80.6		
Nursing	(72)	13.9	86.1		
Pharmacy	(50)	6.0	94.0		
Family Income:					
<$6,000	(91)	16.5	83.5		
$6K-$12K	(117)	21.4	78.6		
$12K-$18K	(139)	22.3	77.7		
$18K-$24K	(171)	20.5	79.5		
$24K-$30K	(120)	19.2	80.8		
$30K-$36K	(129)	17.0	83.0		
$36K-$42K	(62)	16.1	83.9		
$42K-$50K	(63)	23.8	76.2		
$50K-$60K	(74)	21.6	78.4		
>$60K	(18)	11.1	88.9		

* = Differences are statistically significant at pr <.01.

[1]The material contained in this table was obtained from the ACT Assessment.

[2]For ease of identification, we labeled the students according to the year they entered SDSU and according to when they left. Thus, those who are in the 1985-1986 category entered in 1985 but did not attend the following year; 1985-1987 students entered in 1985 and attended the Fall of 1986.

Family income was a third factor examined in the investigation of the non-return rate. After all, it seemed imminently reasonable that financial duress could be a major contributor to the non-return rate. However, as reasonable as this hypothesis might seem, the data presented in Table 6 do not support such a conclusion. There is no systematic relationship between the level of family income and the probability of a student returning to SDSU for his or her sophomore year.

To broaden the exploration of the differences between returning and non-returning students, information obtained from the CIRP on a student's degree of certainty in his or her future plans was employed. Presented in Table 7 is data on the relationship between non-return rate and a student's degree of certainty with respect to both his or her college major and future occupation. While strong positive relationships between both types of certainty and the student return rate were expected, they were not found. For the certainty of career, a modest positive relationship was found since those who left SDSU were (slightly) less certain of their choice than were those who stayed. In contrast, the certainty of college major was found to be inversely related to the return rate since those students who did not return were more confident of their choice than were those who stayed.

Further explorations (not shown here) of the differences between returners and non-returners yielded an unexpected set of "non-differences". Using data from the CIRP, we found that none of the following factors distinguished between returning students and non-returning students: mother's educational attainment, father's educational attainment, number of math courses taken in high school, number of English courses taken in high school, number of physical science courses taken in high school, and number of biological science courses taken in high school. Given that these six factors can be considered indicative of the value placed on education or of an attempt to prepare for a successful college experience, the fact non-returners did not differ from returners is surprising. Perhaps the unexpected nature of the results is a reflection of the lack of understanding about a student's decision to leave SDSU.

The final data presented in this report represent an attempt to separate the effects of several of the factors discussed above on the student return rate. Presented in Table 8 are the results of an analysis of the differences in the capabilities of returners versus non-returners, holding constant the effects of sex, and then of college, and finally of marketing region. What is most impressive about the results is that for every set of comparisons except one (i.e., the West River comparison), students who did not return had a lower ACT over-all score than did those who returned. Such consistent results suggest that the most important factor affecting the return rate of students is the educational capability of the students themselves and that other factors play at best a supporting role.

Table 7. Percent Distribution of Selected Characteristics: Non-Returners Compared to Returners.[1]

Instrument/ Characteristic	Attrition Category[2]			
	Freshman Non-Returners 1985-1986 (207)	Sophomore Returners 1985-1987 (812)	Junior Returner 1985-1988	Senior Returner 1985-1989
Certainty of College Major*			(The material for Junior and Senior returners will be available in the Fall of 1987 and 1988, respectively.)	
Very Sure	28.5	26.4		
Fairly Sure	46.9	49.8		
Not Sure	20.3	23.9		
Certainty of First Occupation Choice*				
Very Sure	18.9	19.5		
Fairly Sure	46.3	51.0		
Not Sure	20.3	29.5		

* = Differences are statistically significant at pr <.001.

[1]The material contained in this table was obtained from the ACT Assessment. The percentages do not necessarily add to 100% due to round-off or to non-applicapable responses.

[2]For ease of identification, we labeled the students according to the year they entered SDSU and according to when they left. Thus, those who are in the 1985-1986 category entered in 1985 but did not attend the following year; 1985-1987 students entered in 1985 and attended the Fall of 1986.

Table 8. ACT Over-All Score for Non-Returners Compared to Returners, Controlling for Selected Characteristics.

Instrument/ Characteristic (N)	Attrition Category[1]			
	Freshman Non-Returners 1985-1986	Sophomore Returners 1985-1987	Junior Returner 1985-1988	Senior Returner 1985-1989
Sex:				
Female	20.17	21.21	(The material for Junior and Senior Returners will be available in the late Fall Semester of 1987 and 1988, respectively.)	
	(77)	(416)		
Male	19.46	22.22		
	(115)	(378)		
College:				
Ag & Bio	18.10	20.46		
	(52)	(151)		
Art & Sc	20.06	21.42		
	(50)	(179)		
Engineer	22.23	24.91		
	(26)	(128)		
Gen Reg	20.22	20.89		
	(44)	(189)		
Home Ec	17.78	20.68		
	(9)	(47)		
Nursing	19.44	20.61		
	(9)	(57)		
Pharmacy	22.00	23.67		
	(2)	(43)		
Marketing Region:				
Northeast S.D.	20.48	22.83		
	(21)	(84)		
East Central S.D.	19.95	21.72		
	(91)	(358)		
South East S.D.	19.48	21.63		
	(29)	(129)		
West River S.D.	21.16	20.00		
	(25)	(105)		
South West Minn	17.37	22.07		
	(19)	(89)		
North West Iowa	17.83	22.69		
	(6)	(29)		

[1]For ease of identification, we labeled the students according to the year they entered SDSU and according to when they left. Thus, those who are in the 1985-1986 category entered in 1985 but did not attend the following year; 1985-1987 students entered in 1985 and attended the Fall of 1986.

ERIC

RECOMMENDATIONS FOR FUTURE RESEARCH

The material presented in this report was explicitly designed to be an initial investigation into two questions identified as crucial to the further development of the admissions and retention programs at SDSU. And while some answers to these questions have been obtained, new questions have been uncovered. In this section, we wish to comment on these and other questions which, when taken together, suggest possible avenues for a future research program having as its goal the continued enhancement of the operation of SDSU's Admissions Office.

As noted in the introduction, the questions addressed here were only two of several posed by the Admissions Office. Two other questions not addressed here deserve mention because they should be considered in any plan for future research. The first pertains to the question of SDSU's image to the outside community. Specifically, how is SDSU viewed as an institution of higher learning by SDSU students, by South Dakota students who choose not attend SDSU, by the people of South Dakota, by individuals in SDSU's out-of-state marketing regions, and by influential decision makers (e.g., South Dakota government officials) in the state. While some information on the perception of SDSU's students is available, there is little, if any information, on the perceptions of the other groups enumerated. If the personnel of the Admissions Office are to do their job well, they must have accurate and complete information on the attitudes of the people in their marketing region influential in their activities.

In addition to the image question, the Admissions Office personnel asked about the means by which they could demonstrate SDSU's quality as an institution of higher education. Specifically, they desired information on objective measures of quality which could be used in discussions with prospective students and with individuals who could possibly be instrumental in the college selection process of prospective students. Clearly, this question has two components. First, what are objective measures of quality which could be used by people outside of higher education to evaluate an institution of higher education? There are, of course, many indicators currently used: ratio of doctorates to non-doctorates among the faculty, research productivity of the faculty, size of library, sophistication (in terms of equipment, programs, and staff) of the computer facilities, etc. The number and variety of potential indicators raises the second question. Specifically, of those which could be used, which are the most salient to potential undergraduate students and their advisors? Do students really care whether an instructor has a doctorate? Do they understand the importance of the research productivity of the institution's faculty? Do they consider the size and completeness of the library when deciding on a college or university? To date, the answers to these and other such questions are not known. However, until the question of the salience of the potential indicators is addressed, the attempt to use measures of quality to impress potential students is likely to remain a hit-or-miss proposition.

In addition to the Admissions Office questions not addressed by this report, there were several sets of research issues uncovered by the answers provided to the two questions which were addressed. While the consistency of the answers to the first one (i.e., the regional variation question) lead to the conclusion there is little to be gained from further exploration of this topic, the same cannot be said for the answers obtained for the second one (i.e., the attrition question).

In terms of calling for further investigation, the answers obtained for the attrition question can be categorized into one of two major groupings. The first consists of results which are understandable and predictable, and, therefore, do not represent a pressing research agenda. For instance, it is reasonable that non-returning students are not as well prepared educationally as are returning students, and that they do not do as well in their course work. Assuming this finding is born out in subsequent research, we suggest that the admittedly scarce resources available for admissions and retention research be directed toward more pressing attrition questions.

The second major grouping of attrition related results consists of those which, without further investigation, are not, at present, fully understandable. Why is there such a tremendous variation among colleges in terms of the rate of non-returnering versus returning students? Why do male students have such a high non-return rate? Why isn't the level of education of either parent an important predictor of the return rate? Why don't the number of "core" courses (English, math, and science) taken in high school maintain an inverse relationship with a high return rate? While numerous hypotheses and guesses can be created to explain these unexpected results, further research is required to insure we are not stuck with unsupported hypotheses or merely blind guesses.

Appendix A

Presented below is the phrasing of the question appearing on the CIRP which attempted to ascertain the reasons freshmen gave for attending the university/college they were currently attending.

Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
1) My relatives wanted me to come here			
2) My teacher advised me			
3) This college has a very good academic reputation			
4) This college has a good reputation for its social activities			
5) I was offered financial assistance			
6) This college offers special educational programs			
7) This college has low tuition			
8) My guidance counselor advised me			
9) I wanted to live near home			
10) A friend suggested attending			
11) A college rep. recruited me			
12) This college's graduates gain admission to top graduate/ profeessional schools			
13) This college's graduates get good jobs			
14) Not offered financial aid by first choice college			

Assessment and Testing Office

South Dakota State University
Brookings, SD 57007

ASSESSMENT DATA AT SOUTH DAKOTA STATE UNIVERSITY: Analysis, Results, and Recommendations

Summary Considerations

December, 1987

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SUMMARY CONSIDERATIONS

The purpose of educational assessment is to provide institutions, departments, and students with information for identifying strengths and weaknesses within university programs. This information can be used by university faculty and staff to enhance academic quality.

This document is an initial investigation into the usefulness and appropriateness of assessment data analysis at South Dakota State University. Although the results thus far certainly provide answers to specific questions asked by university administrators and faculty, new questions have arisen for every answer obtained. For instance, we now have accurate baseline data on the ACT scores of entering SDSU freshmen by college. At least two questions arise: (1) What is the trend in scores for each college?, and (2) What influence does a college have on assessment scores? Each answer suggests more questions.

One implication is obvious: there is a need for valid, long-run assessment data at SDSU. This data must be organized, analyzed, and evaluated in a manner that is meaningful to university planners and decisionmakers. Nationally, many universities maintain offices dealing with institutional research and assessment. These offices provide ongoing assessment data concerned with strategic areas of the university.

Assessment information is needed at all stages of the planning process. Questions are asked which give rise to further questions. However, analyzing assessment data and finding answers can be a major research endeavor. For this reason, proper analysis is expensive and thus, conveniently overlooked.

This document, which is the culmination of six months of research and analysis by the 6-member Assessment Program Team, contains specific recommendations at the end of each report. Taken as they are, each report provides answers to certain questions while suggesting new ones in the recommendations. Collectively, the suggestions for further study begin to provide a framework for an assessment plan that encompasses and unites the five streams of initiative at SDSU into a cohesive, strategic planning process.